HOSPITAL ABSTRACTS

A MONTHLY SURVEY OF WORLD LITERATURE

PREPARED BY THE DEPARTMENT OF HEALTH

AND SOCIAL SECURITY

VOLUME 15, NO. 11, ABSTRACTS 1527-1679. NOVEMBER 1975

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CONTENTS

	page
Hospitals in general	529
Hospitals in other countries	530
Planning, design and construction	530
Selection of site	530
Building: tendering, etc.	531
Hospital design	531
Design of individual general hospitals	532
Design of special departments	532
Design of special hospitals or units	533
Wards and patients' rooms	534
Nurses' homes	534
Evaluation of buildings	534
Engineering services	535
Installations in general	535
Insulation against sound and temperature	535
Maintenance of buildings and equipment	535
Sanitary equipment and fittings	536
Equipment, fittings, furniture	536
Equipment generally	536
Staff generally	536
Staff complements	536
Recruitment	537
Staff management	537
Staff training	538
Staff welfare	538
Special classes of staff	539
Medical staff	539
Nursing staff	539
Other professional and technical staff	541
Organization and administration	542
Economics of hospital management	544
Running costs	545
Bed occupancy, economic use of beds	546
Emergency admission, emergency bed services	546
Data processing	547
Medical records	548
Finance and accounting	549
Finance	549
Hospital accounting	550
Supplies and stores	551
Supplies	551
Economic use of supplies, disposables	551
Catering, dietetics, kitchens	551
Hospital catering	551
Dietetics in the hospital	552
Kitchens	552
Canteens, staff dining-rooms	552
Laundries and linen service	553
Laundries	553
Hospital linen and textiles	553
Hygiene in the hospital	553
Hospital infections	553
Sources of infection	553
Prevention and control	554
Hygiene in the operating theatre	556
Safety measures	556
Accidents in gas and drug administration	556
The patient	557
Admission and reception	557
Welfare of the patient	558
Voluntary service, voluntary workers	558
The general practitioner and his patients	558
Transport of patients	559
Hospital care	559
Home care, after-care	561
Special departments	561
Wards	561
Operating suites	561
Anaesthesia	561
Pharmacy	562
Laboratories	565
Blood transfusion department	565
Diagnostic X-ray department	566
Occupational therapy department	566
Departments for special therapy	566
Intensive care units	567
Special hospitals and units	569
Out-patient	569
Casualty and accident	570
Infectious diseases and isolation	570
Children	571
Geriatrics and long-stay	574
Cancer	575
Cardiology	575
Orthopaedics	575
Urology	575
Surgery	576
Maternity	576
Gynaecology	577
Opthalmology	577
Dentistry	577
Psychiatry	577
Social medicine	580
Author index	v
Addresses of publications	vi

HOSPITAL ABSTRACTS

Vol. 15 November, 1975 No. 11

HOSPITALS IN GENERAL

1527. HAEFLIGER, E. and ELSASSER, V., editors. Krankenhausprobleme der Gegenwart. Band 8. Medizinische und ökonomische Probleme im Krankenhaus aus der Sicht von Arzt, Krankenschwester und Administrator. **[Present day hospital problems. Volume 8. Medical and economic problems in the hospital from the point of view of doctor, nurse and administrator.]** Bern, Huber, 1974, 318pp.

The developments in hospital medicine and construction which are necessary to enable the hospital to carry out its prime function of patient care are considered in these papers in relation to the low financial resources available in the current economic situation both in Switzerland and Europe. Detailed analyses are given of the economics of hospital administrative, laboratory and domestic services, including a study of the benefits of computerization. The adequacy of the organizational structure in acute and long-stay hospitals and the costs resulting from replanning of psychiatric hospitals are evaluated. A chapter is devoted to the VESKA accountancy plan and a section to the relationships between the Swiss Hospital Institute, doctors, nurses, hospitals, colleges and planning bodies. Detailed analyses are given of: (i) medical views on psychiatric, sociological and alcoholic problems and treatment; (ii) organization of and expenditure on hospital hygiene and cleaning; (iii) medical and nursing views of the size of units in relation to their functions; (iv) the present and future uses of standardization in the hospital; and (v) legal, medical and technical problems of noise prevention, particularly in the more automated hospitals.

1528. SELLORS, Sir T. H. and RAINS, A. J. H. **What is a hospital for?** *World Medicine*, London, 1975, Sept. 10, vol. 10, no. 24, pp. 54, 56, 58, 60, 63.

After tracing the development of hospital services in Great Britain, the authors consider the present and future state of hospital care in an attempt to answer the question 'What is the hospital for?' They examine particularly the relationship of the hospital to other services, problems of hospital design and size, and selection of site.

1529. SJUKVÅRDENS OCH SOCIALVÅRDENS PLANERINGS- OCH RATIONALISERINGSINSTITUT. **Spri's publications 1974.** Stockholm, Spri, 1975, 84pp.

This volume is a collection of the summaries in English of 32 of Spri's publications of 1974. A complete list of Spri's publications since 1968 is also included.

HOSPITALS IN OTHER COUNTRIES

1530. MELINAND, G. Sociologie de l'hôpital. **[Sociology of the hospital.]** Paris, Heral Editions, 1974, [iv], 207pp.

This study attempts to describe the behaviour of the various elements in the hospital —individuals, professional groups and structural organization—whose actions and interactions constitute the sociology of the hospital. There are chapters on: the hospital's clientele; post-war options; the reform of 1958; economic constraints; in-patient care; emergency centres; laboratory medicine; the diagnostic centre; hospital feudalism; nursing service; progressive patient care; health administration; and immediate options.

1531. CHESTER, T. E. **The New Zealand health service: another approach to integration.** *Hospital and Health Services Review*, London, 1975, Sept., vol. 71, no. 9, pp. 306-311.

The present organization of health and hospital services in New Zealand is outlined. It has been generally criticized for its fragmentation and lack of co-ordination. Recent government proposals for a far-reaching restructuring of the system have the basic goal of abolishing the existing miscellany of health agencies and their replacement by 14 regional health authorities with undivided responsibility for the provision and development of a comprehensive range of health care. The head office of the Department of Health would be replaced by a New Zealand Health Authority. Charts show the present and proposed structure and the management structure of a regional health service. The regional health authorities would consist of locally elected members and government appointees. A multidisciplinary consensus system of management similar to that in Great Britain is proposed, but no provision is made for the participation of clinicians in addition to the community physician.

PLANNING, DESIGN AND CONSTRUCTION

1532. **Special issue containing further papers on:—'Planning and building of health care facilities under conditions of limited resources'.** *World Hospitals*, London, 1975, vol. 11, no. 4, pp. 228-250.

This special issue is a follow-up of the papers given at the Fifth International Public Health Seminar [see *Hospital Abstracts*, Vol. 15, Abstract 1066]. It includes the keynote paper which reviewed the problems from the viewpoint of the World Health Organization and five papers summarizing the discussions at the seminar which were given by seminar participants during the 19th International Hospital Congress in Zagreb in June 1975.

SELECTION OF SITE

1533. STUDNICKI, J. **The geographic fallacy: hospital planning and spatial behavior.** *Hospital Administration*, Chicago, 1975, vol. 20, no. 3, pp. 10-21.

This paper focuses upon research efforts dealing with the spatial behaviour of

hospital in-patients, that is, the influence of distance and travel on where hospital care occurs. Hospital planning will be facilitated when hospitals within a region know who their patient populations are and how these populations come to arrive at particular facilities. Especially in metropolitan areas, where a number of hospitals are clustered together with a dense population, the question of how individual catchment areas are established is still largely unanswered. While the concept of the geographically defined planning unit has been used extensively in the past and is still used, there are real doubts about its effectiveness in metropolitan hospital planning. Many studies have focused on the distance relationship between a hospital and its in-patient population. The aggregate patient-to-hospital distance may be viewed as the extent to which hospitals fill their beds on the basis of physical proximity to populations. The effect of distance is, however, by no means consistent for all patients or all hospitals. Much of the latest research has been aimed at separating out the differential effects of hospital and patient variables on the spatial distribution of patients to hospitals.

BUILDING: TENDERING, ETC.

1534. NATIONAAL ZIEKENHUISINSTITUUT. Het bouwproces een wegwijzer voor opdrachtgevers. **[The building process: a guide for those arranging building projects.]** Utrecht, Nationaal Ziekenhuisinstituut, 1975, 113pp. fl10.00.

This guide opens with an overall view of building procedures and the intended function of the hospital building. This is followed by the discussions and reports of three study groups composed of administrators, doctors, social workers, architects, builders and efficiency experts. The groups dealt with: (i) the socio-psychological problems involved and the groups who should participate in the decision-making process; (ii) the optimum amount of information to be supplied and at what stage it can best be supplied by the administrator; and (iii) the co-operative and contractual relationships which need to be developed between the administrator, the architect and the builder. Each section is accompanied by illustrative building plans, tables and flow charts.

HOSPITAL DESIGN

1535. BRIGDEN, R. J. **Best buy hospital. 1. Central treatment facilities.** *Nursing Times*, London, 1975, Aug. 28, vol. 71, no. 35, pp. 1363-1366.

The West Suffolk Hospital, Bury St. Edmunds, and Frimley Park (Surrey) Hospital have a common plan (illustrated) of a core block of services and a U-shaped surrounding block of wards with a continuous corridor between. Treatment rooms were included in the service core to achieve economies in capital and running/maintenance costs and a saving of space in wards following a survey in 1967 which indicated 50 per cent under-use of ward treatment rooms. A further survey in 1973, prior to moving into the new West Suffolk Hospital, carried out to assess the work load and necessary sterile stock levels, also validated the previous survey results. After nine months operation another survey showed 84 per cent of the procedures were carried out on the central facilities. Staff, originally apprehensive about the change in practice, were entirely satisfied with its operation.

1536. CALDERHEAD, J., compiler. **Hospitals for people: a look at some new buildings in England.** London, King Edward's Hospital Fund for London, for Architects Division, Department of Health and Social Security, 1975, 64pp. £3.50.

This book is intended to encourage good design and a greater awareness among those who have some part in the design process of the effect of design on the environment and its influence on people and their behaviour. The illustrations are highly selective and are intended to show generally the achievements in the design of health buildings since the beginning of the National Health Service. There are 85 photographs, many in colour, arranged in four groups: the site and its environment; the building and its immediate environment; internal environment; and planning for people. A list of schemes illustrated, with their architects and responsible authority, is included.

DESIGN OF INDIVIDUAL GENERAL HOSPITALS

See also Abstract No. 1544

1537. **Memorial Hospital System, Houston, Texas: technical advancements aid patient care.** *Southern Hospitals*, Greenville, S.C., 1975, July, vol. 43, no. 7, pp. 10-11.

This new $70 million complex will be finished late next year and will accommodate 600 patients. A large number of prototype systems are being put to practical use following detailed research, testing, interviewing former patients and gathering technical information. The first phase will include a hospital tower, doctors' professional building, energy-dispatch building, education centre, heliport and parking for 1,100 cars. The second phase will provide a second hospital tower, parking garage, motel for visitors and out-patients, and additions to the energy-dispatch building. The base of the hospital tower, consisting of sub-basement, basement and two floors, will house medical and administrative support services. A mechanical floor directly above the base, seven patient floors and elevator/mechanical penthouses at roof level comprise the upper hospital tower. The six-wing 'snowflake' shape of the tower arose from the octagonal patient room design. Brief details of some special features of the hospital are given. A plan of a patient floor is included.

DESIGN OF SPECIAL DEPARTMENTS

1538. Krankenpflegeschule in Bethel bei Bielefeld. **[Nursing training school at Bethel near Bielefeld.]** *Bauen + Wohnen*, Zürich, 1975, July/Aug., vol. 29, nos. 7/8, pp. 322-324.

This complex (architects: Hans Christoph Martin, Eugen Lausberg and Wolfgang Wollenburg) is built on a hillside to a suitably staggered design with a linking network of pathways diagonal to the slope to avoid the need for climbing. Car parks above and below the slope serve the flats and homes in the five-storey accommodation section. Space is available for a future extension to the two-storey training school and for additional two- or three-storey accommodation blocks to include an additional nurses' home and maisonettes or three-level flats. Details of the buildings are shown in the 22 plans included in the paper.

1539. LINDBERG, G. Produktionsköket vid Sundsvalls nya sjukhus. **[Production kitchen for new hospital at Sundsvall.]** *Sjukhuset*, Göteborg, 1975, vol. 52, nos. 7/8, pp. 398-400.

A mass production kitchen has been erected in association with the new hospital in Sundsvall; it supplies the 3,000 patients plus staff in the 15 institutions in the area. Ten institutions receive meals served on trays and the remainder in containers for subsequent serving. All food is supplied cold. The kitchen staff work a five-day week, Saturday and Sunday tasks being confined to serving, distribution and washing up. All food preparation facilities are on the ground floor, with windows providing all-round views of the open countryside. Staff room, offices, trials kitchen and technical installations are in the basement. The trolley park (120 trolleys) has machinery for cleaning the trolleys. All conveyor belt and other machinery has a maximum working height of 900 mm., and much use has been made of plastic in order to reduce noise and weight. The paper is illustrated with seven interior photographs.

1540. GAGE, H. B. **Planning the new X-ray department.** *Radiologic Technology*, Baltimore, 1975, vol. 46, no. 5, pp. 359-364.

In planning a new or redesigned diagnostic X-ray department it is necessary to establish the goals and functions of the department before attempting any layout sketches. The realities of any constraints which may be involved must be faced early so that the planning will not turn out to be just wishful thinking which must be scaled down after much time and effort have been wasted. Those involved in planning should study the various systems that may be used and their probable effect on layout. A complete list of auxiliary features that will be required should be compiled. With this done in advance, then layout planning can begin, keeping patient flow, staff work patterns and film processing all uppermost in mind.

DESIGN OF SPECIAL HOSPITALS OR UNITS

1541. MORGAN, D. **Extended care designed for action.** *Dimensions in Health Service*, Toronto, 1975, Sept., vol. 52, no. 9, pp. 16-17.

The new 400-bed extended care facility for veterans at Sunnybrook Medical Centre, Toronto, is bright and modern in every detail, air-conditioned and humidity controlled and planned to keep the patients out of bed and as functional as possible. The carpeted ground floor includes such features as an extensive area called the Town Square where patients may go to chat, a poolroom, shops, cafeteria, library, as well as administrative offices and treatment departments. Facilities for outside activities are also provided. The three upper floors have two- and three-bed patient rooms, colour-coded for location. Brief details are given of equipment and interior design.

1542. CANTER, D. **Designing a therapeutic setting.** *New Behaviour*, London, 1975, Sept. 4, vol. 2, no. 10, pp. 374-375.

Great Britain is becoming something of a world pace-setter in the development of new organizational forms for therapeutic settings. Various designs are also being

developed to facilitate the achieving of the goals of these emerging organizations. This paper emphasizes the need to base the design of these facilities on sound research. It discusses a number of research studies which show the effect of environment on patients and illustrate the design deficiencies which result from the different conceptions of the nature of the patient and his problems.

WARDS AND PATIENTS' ROOMS

See also Abstract No. 1542

1543. RAB, K. S. **'Team patient care' room design.** *Hospital Administration in Canada*, Don Mills, Ont., 1975, July, vol. 17, no. 7, pp. 25-28.

The design of patient rooms using a 'team patient care' approach tries to cater for the needs of the patient and of the staff both in their dealings with the patient and with each other. Basic design components for both private and semi-private rooms are: patient area, with necessary furniture; bathroom; and nursing alcove, serving one or more patients. Diagrams show designs for a single room, double room, and two designs for a four-bed intensive care unit. An important feature of the nursing alcove is the 'Nurserver', a cabinet supplying staff with all necessary patient equipment; this is illustrated diagrammatically. In semi-private rooms, the team patient care concept produces a design with equality of facilities, such as access to a window, for all patients in the room and ensures privacy for individuals when required, for example by the use of curtains across the room. Such designs for patient rooms have proved flexible in use, and may be used for intensive care, obstetrics and other relevant needs. Ottawa General Hospital will be the first in Canada to incorporate team patient care design into its new facilities.

NURSES' HOMES

See Abstract No. 1538

EVALUATION OF BUILDINGS

1544. THOMPSON, J. **Hard core trap.** *Design*, London, 1975, Sept., no. 321, pp. 60-65.

Planning of the new 871-bed, 12-storey Royal Free Hospital, London, began in 1956; it finally opened on 1 October 1974 after 18 years on the drawing board and six years under construction. It is now apparent that its ingenious but rigid circulation and service plan, which separates 'clean' and 'dirty' areas, has been responsible ultimately for the outstanding faults in the whole design. The circulation core was planned around rigid duct and supply systems, set when the basic structure was drawn up in the late fifties; it could not then be updated as planning proceeded. A number of design faults which have arisen as a result are discussed. Photographs illustrate some of the problems which have resulted.

ENGINEERING SERVICES

See Abstract Nos. 1563, 1564

INSTALLATIONS IN GENERAL

See also Abstract No. 1621

1545. SANCHEZ PAGA, S. La ingenieria de las instalaciones en el hospital del Sagrado Corazón de Barcelona. **[Engineering installations, Sacred Heart Hospital, Barcelona.]** *Estudios sobre Hospitales*, Barcelona, 1975, no. 71, pp. 38-41, 44-45, 47-50, 52-55, 57-58, 60-62.

This new 420-bed hospital is arranged in four blocks—ward block, polyclinic, surgical block and technical services. The air-conditioning, electrical supply, lighting and water supply installations are described in some detail. Brief notes are given on patient-nurse communications, fire protection, medical gases, pneumatic tube system, incineration and the data centre.

INSULATION AGAINST SOUND AND TEMPERATURE

1546. TURNER, A. G., KING, C. H. and CRADDOCK, J. G. **Measuring and reducing noise.** *Hospitals*, Chicago, 1975, Aug. 1, vol. 49, no. 15, pp. 85-86, 88, 90.

Sound level measurements were made over a period of one month in the North Caroline Memorial Hospital, Chapel Hill. Locations for measurement included 34 sites in in-patient and out-patient areas and four sites in the maintenance shops and mechanical equipment areas. Instantaneous impulse measurements were made at each site three times for each three-hour segment of a 24-hour period. Each of the three measurements was made on a different day. In addition, the medical-surgical and coronary intensive care units were monitored continuously for 24 hours, in three-hour segments over eight days. Data from 816 measurements in the patient care areas were used to prepare the hospital's noise profile (reproduced as a graph). A composite noise rating was prepared for the intensive care units. Several uses for the data obtained from such a hospital noise analysis are outlined.

MAINTENANCE OF BUILDINGS AND EQUIPMENT

1547. CAETANO, E. **Preventive maintenance in hospitals.** *Hospital Engineering*, Stevenage, 1975, Sept., vol. 29, pp. 3-5, 7-11, 13, 15.

With a modern hospital representing huge sums of money, both in capital and running costs, the use of preventive maintenance can result in considerable savings. The first part of this paper discusses the characteristics of preventive maintenance, preventive and curative maintenance, normalization of preventive maintenance, staff, and the role of private firms. The second part describes the system of preventive maintenance in Portugal, which is based on four regions: north, centre, south and Lisbon. Charts

show the organization of the service at national and regional level and at district, central and teaching hospitals. Procedures at local and regional level are outlined and costing is discussed.

SANITARY EQUIPMENT AND FITTINGS

See Abstract No. 1637

EQUIPMENT, FITTINGS, FURNITURE

EQUIPMENT GENERALLY

See Abstract No. 1592

STAFF GENERALLY

1548. HAEFLIGER, E. and ELSASSER, V., editors. Krankenhausprobleme der Gegenwart. Band 6. Das Krankenhaus und sein Personal. **[Present day hospital problems. Volume 6. The hospital and its staff.]** Bern, Huber, 1974, 215pp.

The problems of maintaining the hospital as both a humanitarian and an economically viable organization under present difficult financial conditions are considered in the papers in this volume. The advantages of centralization, computerization and methods of expenditure control and problems of staff fluctuation, shift working and other working systems are discussed, also the social and architectural needs of hospital staff as regards accommodation. Important humanitarian activities discussed include group nursing by hospital and voluntary workers and joint staff-patient activities as a means of avoiding patient institutionalization and/or isolation. One section of the book is devoted to the legal and medical responsibilities of medical and nursing staff where mistakes have been made in patient care, particularly in psychiatric hospitals.

STAFF COMPLEMENTS

See also Abstract Nos. 1557, 1558

1549. GOLDFARB, M. **Methodological problems of health manpower planning models.** *Medical Care Review*, Ann Arbor, Mich., 1975, June, vol. 32, no. 6, pp. 696-723.

This paper describes and evaluates current techniques by which economists and others attempt to measure supply of and demand for health manpower. Existing studies can be divided into six general methodological groups: (i) fixed population ratio and input-output approaches; (ii) professional standards approaches; (iii) 'counting-job-slots' approaches or vacancy models; (iv) optimizing approaches (including linear programming models); (v) supply projection approaches; and (vi)

econometric models. Comprehensive econometric simulation models are considerably more difficult to develop and apply than fixed coefficient models, but they have the advantage of allowing supply and demand to be influenced by prices and, at least theoretically, of permitting technical factor substitution to be built in. There are, however, at least two problems in applying these models: (i) the algebraic problems involved in developing anything other than a purely linear model are immense; and (ii) it is often prohibitively expensive or impossible to get all the data needed to estimate satisfactorily a Feldstein-Kelman or Yett type of model.

1550. SJUKVÅRDENS OCH SOCIALVÅRDENS PLANERINGS- OCH RATIONALISERINGSINSTITUT. Personalpool: försök med bemanningsplanering dag för dag. **[The staff pool: trial programme for the allocation of staff on a day-to-day basis.]** (Spri rapport 3/75) Stockholm, Spri, 1975, 53pp.

This report describes a model for a staff pool developed by the Federation of Swedish County Councils and a pilot study of its use in three hospitals. The pool consists of a number of components called modules, the contents of which are summarized. Absences known in advance can be taken into consideration in planning the modules. The model proposes that the staff pool should be administered by a special vacancy office which is part of the personnel department but works in close contact with the nursing staff. In the pilot study, staff reaction was favourable, but a number of amendments were suggested. [This abstract has been prepared from an English summary of the report.]

RECRUITMENT

See also Abstract 1559

1551. TROUT, F. **Central staffing office smoothes personnel problems.** *Dimensions in Health Service*, Toronto, 1975, Aug., vol. 51, no. 8, pp. 15-17.

The interviewing and recruitment of staff, particularly direct patient care staff, is much simplified if a central staffing office is established to serve all hospitals in a city. Staff can be assessed more accurately and deployed more effectively and objectively to areas where needed, thus improving patient care. The use of master schedules and controlled staff assignments permits better planning, not only by the ward staffs as regards patient care, but by administration and staff in planning for the future. Staff stability and morale are definitely improved, turnover rates are reduced and expenses are saved.

STAFF MANAGEMENT

See also Abstract No. 1560

1552. BURROUGHS, W. A. and RICHARDSON, P. **Behavior modification in a clinical laboratory.** *Hospital Administration*, Chicago, 1975, vol. 20, no. 3, pp. 54-59.

The use of behaviour modification techniques to alter various sorts of behaviour is now well documented and widely supported by research data. The purpose of this

study was to investigate the use of one desired employee outcome (time off from the job with pay) to improve work performance (reduction of unfilled requests) in a clinical laboratory. The subjects of the study were 11 venipuncture technicians employed in a 865-bed hospital on the 0630 to 1430 shift. The study consisted of three parts: (i) pre-contingency period, during which data for comparative purposes were gathered; (ii) contingency period, during which the staff were given 15 minutes off for two consecutive days in which there were no unfilled requests for the entire shift, 45 minutes for four consecutive days and 75 minutes for six consecutive days; and (iii) a post-contingency period, to determine whether performance would return to pre-contingency levels following the removal of the time off reward. The results for each period are presented in graphs. It appears that offering time off for effective group performance was quite successful in reducing unfilled requests.

STAFF TRAINING

See also Abstract Nos. 1538, 1556, 1561, 1562, 1564, 1565

1553. McCool, B. P. **The hospital: an educational system.** *Hospital Progress*, St. Louis, 1975, July, vol. 56, no. 7, pp. 67-71.

Hospitals have always been concerned with the training of doctors and nurses but recently their educational function has extended to all hospital staff, boards of trustees, patients and community groups. This paper analyses the hospital as an educational system and describes the programmes for health staff, consumers and trustees. The system can be viewed as a series of input, transformation and output factors which interact with health care service, education and accreditation sub-systems. A model reproduced in the test illustrates this. The input factors are the human and capital resources needed to run the system; transformation is the conversion of the raw materials (people and resources) into a finished product; and output factors relate to the product—skilled staff, informed consumers and board members, as well as innovations in instruction and better patient care. Guidelines on the management of the educational function are suggested. These are based on three premises: (i) the definition of the educational function should be consistent with the aims of the hospital; (ii) centralized management and cost sharing should be encouraged when organizing the educational function; and (iii) evaluation of the educational function should include an analysis of input, transformation and output factors and of the feedback obtained from interacting systems.

STAFF WELFARE

See also Abstract No. 1641

1554. Gamberale, F. and Svensson, G. **The effect of anesthetic gases on the psychomotor and perceptual functions of anesthetic nurses.** *Work-Environment-Health*, Helsinki, 1974, vol. 11, no. 2, pp. 108-119.

Twenty anaesthetic nurses and 20 nurses with duties in intensive care units were tested with respect to reaction time and perceptual speed at the start and at the end of

a work day. The anaesthetic nurses were exposed to anaesthetic gases in their daily work, but the other nurses were not. No measurable impairment in reaction time and in perceptual speed of the anaesthetic nurses, as compared to the intensive care staff, could be detected. However, results were obtained in one of the reaction time tests indicating that the individual variability of the responses of anaesthetic nurses was greater than that of the comparison group at the end of the work day but not after 16 hours of rest from exposure.

1555. LINNEMANN, C. C. and others. **Use of pertussis vaccine in an epidemic involving hospital staff.** *Lancet*, London, 1975, Sept. 20, vol. ii, pp. 540-543.

An epidemic of pertussis occurred among hospital staff caring for children; eight physicians and five nurses were affected. Pertussis developed in six newborn infants exposed to infected hospital staff in the nursery. Erythromycin prophylaxis was used to control the epidemic. Clinical pertussis developed in five adults infected with *Bordetella pertussis* before erythromycin was used, whereas symptoms developed in only one of the eight adults who became infected after erythromycin prophylaxis was started. The risk of pertussis occurring in adults providing medical care for children should be recognized, and staff with symptoms should be removed from the hospital environment.

SPECIAL CLASSES OF STAFF

MEDICAL STAFF

See also Abstract Nos. 1639, 1657

1556. ARIE, T. **Married women doctors as part-time trainees.** *British Medical Journal*, London, 1975, Sept. 13, vol. iii, pp. 641-643.

Experience of the employment of married women as part-time trainees at Goodmayes [psychiatric] Hospital, Ilford, is described. In the six years since it was set up the psychiatric unit has had 10 part-time trainees, including two who are still there. The origins and development of the scheme are outlined. Brief details are given af the doctors themselves, what they are doing now, their training, issues within the unit and some general issues.

NURSING STAFF

See also Abstract Nos. 1538, 1550, 1551, 1554, 1583, 1617, 1620, 1668, 1678

1557. BEARD, T. C. **Observations on the shortage of trained nurses.** *Medical Journal of Australia*, Sydney, 1975, July 26, vol. ii, no. 4, pp. 137-140.

There is a need to rationalize the distribution of nurses, improve the level of recruitment and, if possible, reduce the losses after graduation. The intention of this paper is to draw attention to the need and to indicate in outline some possible guidelines for action.

1558. YETT, D. E. **An economic analysis of the nurse shortage.** Lexington, Mass., D.C. Heath, 1975, xxii, 325pp. £11.25.

This book represents a compilation and synthesis of the author's research on the labour market for nurses over the past 10 years. The first chapter summarizes an exhaustive survey of the literature. The second describes the difference between a manpower shortage relative to 'needs' criteria and an economic shortage; the analysis in this volume concerns the possibility of an economic shortage. Three economic models of a skilled manpower shortage are considered. The third and fourth chapters summarize all the data that could be collected from a wide variety of sources to apply the three models to the market for nurses. The final chapter applies the data described in chapters three and four to each of the models presented in chapter two. The volume contains numerous tables and graphs and a bibliography with 747 references.

1559. FINN, A. and PENNEY, M. J. **Recruit . . . retrain . . . retain . . . : a suggested solution to the nursing shortage.** *Hospital Administration in Canada*, Don Mills, Ont., 1975, July, vol. 17, no. 7, pp. 29-30.

The shortage of nursing staff is becoming more acute in Canada as the decreasing national birthrate results in fewer nurses graduating. Consequently greater effort is needed by hospital administrators to recruit and then retain staff, and to attract former nurses back to the profession. Nurse recruitment departments are being established in many hospitals to promote the hospital, particularly in schools of nursing, and to deal efficiently with all nurse applicants to the hospital. Ideally the department has its own budget and its staff are well qualified. In order to retain staff, nurses should have opportunities to develop their working potential within the hospital, and administrators should ensure acceptable working conditions. Merit rating and the use of bonuses can help retain the motivation of staff towards working in the hospital, and a benevolent attitude towards nursing staff by the administration can help solve many problems such as absenteeism. Evening refresher courses and 'open house' meetings can help attract former nurses to the hospital.

1560. MARSHALL, K. **Monitoring professional development.** *Hospital Administration in Canada*, Don Mills, Ont., 1975, July, vol. 17, no. 7, pp. 31-32.

A method of monitoring professional nurses' development using 'record of professional development' cards has been instituted at Belleville (Ont.) General Hospital. This scheme was developed as staff could not wait for the final development of the continuing education unit concept, widely discussed in Canada and the United States. Belleville Hospital has a decentralized organization which results in most continuing education taking place in the nursing units, so that monitoring these experiences was difficult. Nurses were therefore made responsible for entering their experiences of further education during one year on a personal 'record of professional development' card; these cards were then used by supervisors when preparing the nurse's annual evaluation. Results during an eight-month period showed that attendance at education programmes increased in the short term, and that courses provided in the nursing units are better attended than those held elsewhere. Some shift workers appeared unable to attend even compulsory programmes, so compensatory

courses are now held. This method has helped reveal problems in the provision and acceptance of continuing education programmes for nurses. A record card used in the scheme is illustrated.

1561. CARRUTHERS, L. J. **Back to nursing at Guy's.** *Nursing Mirror*, Sutton, Surrey, 1975, Sept. 4, vol. 141, no. 10, pp. 69.

As the result of setting up a nurse bank for the Guy's Health District, a course was established to meet the needs of non-practising nurses who wished to return to the profession. The aim of the course is to restore confidence and to familiarize members with a somewhat changed hospital environment and radically changed equipment. It runs for six weeks with members attending one 1½-hour evening session per week and two three-hour day-time practical sessions during weeks three (surgical ward) and five (medical ward). Details of the syllabus are given. At the end of the course each member is asked to complete an evaluation sheet; analysis of these has shown that members feel that the course is achieving its aims.

1562. HICKEY, T. and FATULA, B. **Nursing staff training for an effective gero-psychiatric environment.** *Journal of Psychiatric Nursing*, Thorofare, N.J., 1975, Jan./Feb., vol. 13, no. 1, pp. 15-20.

A short-term, in-service training programme was provided for staff working in the geriatric units of two state psychiatric hospitals. The programme was based on the specific assumption that fostering and maintaining independence in the elderly is a desirable goal. There were 30 trainees and 30 controls in each setting. Details are given of the two units, the training programme, and training outcomes. The implications for curriculum design and training are discussed. Although the results were predictably tentative, they did yield much useful information for subsequent programme design.

OTHER PROFESSIONAL AND TECHNICAL STAFF

See also Abstract Nos. 1625, 1638

1563. FURST, E. **The biomedical engineer in the medical center.** *Medical Research Engineering*, Little Falls, N.J., vol. 11, no. 6, pp. 5-7.

The engineer in the medical centre is very much an individual operating in what is one of the last few citadels of organized individualism—the medical centre. His role includes technical support for research, instrument control and safety for the hospital, teaching and research. Details are given of each function.

1564. COOK, A. M. **An applied bioengineering curriculum.** *Medical Research Engineering*, Little Falls, N.J., vol. 11, no. 6, pp. 13-16.

This paper describes the prototype programme of graduate study in bioengineering now under way at California State University, Sacramento. The integrated programme

involves basic coursework in bioengineering, mathematics, chemistry, biology, classical engineering disciplines, clinical bioengineering courses and practical experience gained through work on a project or thesis. Clinical or applical training is given in conjunction with Sutter Community Hospitals and local industry to provide exposure to current medical and bioengineering practice.

1565. KAUFMAN, R. L. and others. **Development and implementation of a pharmacy technician training program.** *American Journal of Hospital Pharmacy*, Washington, 1975, July, vol. 32, no. 7, pp. 698-702.

The 247-bed Miriam Hospital, Providence, R.I., has employed pharmacy technicians for the past five years. This paper describes their nine-month training programme. The first three months of the course are devoted to didactic training and the remaining six months to acquiring practical experience. Candidates are provided through state-sponsored public assistance or manpower training programmes. A minimum of six individuals is needed to start a course to ensure that at least three complete it. Forty technicians have now completed the programme and six are currently employed by the hospital; 13 others are known to be employed at other hospitals or in health-related occupations.

1566. MILLER, J. C. **The role of the radiographer in the seventies.** *Radiography*, London, 1975, Aug., vol. 41, no. 488, pp. 173-181.

The author considers that up till now the scope of the radiographer has been too limited and she suggests that her role in the seventies might be to be a technical expert and to play an ever increasing part in the field of medical radiography. She would like to see four clear avenues of promotion open to the radiographer—clinical work, management, research and teaching. This paper deals with the training of radiographers and the shortage of them, partly due to their short working life (on average two to two and a half years) after training and partly to emigration. One answer to the high wastage rate would be to attract more men to the profession. The entry qualifications and the suitability of the DSR (Diploma of the Society of Radiographers) course and the standard of teaching are considered. Training in other countries, the effect of the European Community and of the reorganization of the National Health Service are discussed. Official reports on the health professions have so far largely ignored the radiographer but it is hoped that the Halsbury report will recommend realistic salaries and a worthwhile career structure.

ORGANIZATION AND ADMINISTRATION

See also Abstract No. 1589

1567. KAUFFMAN, S. H. **Unit management: a 12-year appraisal.** *Hospitals*, Chicago, 1975, Aug. 1, vol. 49, no. 15, pp. 67-68, 70-71.

Massachusetts General Hospital, Boston, has had unit management since 1963.

Even though it has undergone several organizational changes, its overriding philosophy has remained constant: (i) transfer of responsibility for non-therapeutic management activities to a person other than the professional nurse; (ii) creation of an atmosphere in which a role change can be realized for the nurse; and (iii) cost benefits will be realized only after full implementation and will be related more to cost control rather than cost reduction. The development of the scheme is described. It has relieved the head nurse of non-therapeutic and paramedical duties, freed the nurse to explore new roles, served the physician and the patient by its ability to facilitate the treatment process and minimize the bureaucracy of delivery. The unit manager has served administration by becoming the on-site administrator and the extended arm of administration.

1568. WIJMEN, F. C. B. van. Het ziekenhuis: demokratisering en bestuursstruktuur. **[The hospital: democratization and administrative structure.]** Lochem, De Tijdstroom, 1975, xii, 440pp.

The Works' Councils Act 1950 introduced in the Netherlands the concept of participation in management by means of works' councils; it was rarely applied outside industry. A new act of 1971 attempted to extend its application by introducing a wider concept 'enterprise'. This new law is still not suitable for hospitals and should not be applied to them but a new structure for management and participation should be devised. A model for such a structure is outlined. It involves three bodies: (i) general assembly consisting of all staff, meeting once a year to take general decisions; (ii) hospital council, the highest management body, composed of representatives of the staff and a number of members from outside the hospital as representatives of society; and (iii) supervisory board, of members appointed by a regional health council, with the responsibility for confirming decisions taken by the general assembly. [This abstract has been prepared from an English summary of the book.]

1569. SCHOENHARD, W. C. **Growth potential of hospital management corporations: an analysis.** *Hospital Progress*, St. Louis, 1975, July, vol. 56, no. 7, pp. 72-75.

The author made a survey of the attitudes of hospital management corporation executives in order to examine the present and probable future growth of these corporations and the factors affecting that growth. The study covered 92 per cent of beds owned or leased by such corporations. The executives were asked to rank various factors in the order they believed that they most contributed to growth. Generally speaking it was thought that their growth was due more to efficiency, capital and demand for hospital beds than to remuneration from third parties or less strict state laws of incorporation. The main factors contributing to limited growth were thought to be increased government controls, lack of approval by health planning agencies and unfavourable government reimbursement. The three most important factors thought likely to contribute to future growth were increased demand for management contracts, establishment of national health insurance, and financing health care through the establishment of health maintenance organizations. Five tables in the text illustrate results of the survey.

1570. SONRIER, A. Gestion et finances hospitalières. 2e édition. **[Hospital management and finance. 2nd edition.]** Paris, Editions Berger-Levrault, 1974, 324pp. 68F.

This volume follows the pattern of the first edition [see *Hospital Abstracts*, Vol. 10, Abstract 734], but includes a new chapter on management information. It has also been brought up-to-date and expanded.

ECONOMICS OF HOSPITAL MANAGEMENT

See also Abstract Nos. 1527, 1574

1571. ELNICKI, R. A. **Hospital productivity, service intensity, and costs.** *Health Services Research*, Chicago, 1974, vol. 9, no. 4, pp. 270-292.

A model based on financial data available from FrankfordHospital, Philadelphia, is used to analyse the relationships between service intensity, productivity and per diem cost growth rates at various input cost growth rates. Results of the analysis indicate that large increases in labour productivity and/or decreases in service intensity would be necessary in order to limit growth rates of per diem costs to an acceptable eight per cent per year.

1572. RUCHLIN, H. S. and LEVESON, I. **Measuring hospital productivity.** *Health Services Research*, Chicago, 1974, vol. 9, no. 4, pp. 308-323.

A statistical method is presented for estimating hospital costs relating hospital output, a factor of patient care, education and research, and hospital input measured as operating expenditure (salaries and other costs) and estimated expenditure flow (based on depreciation and stock value). Its use is applied to available data from United States hospitals at local and regional/national levels, including methods of estimating the associated variables to obtain acceptable productivity measures.

1573. DANIELSEN, E. Effektiviseringsvirksomhet i sykehussektoren. **[Improving efficiency in hospital areas.]** *Norsk Sykehustidende*, Oslo, 1975, Aug., vol. 48, no. 8, pp. 152-160.

Health service staff have increased by about five per cent annually since 1960; 7,200 new posts are required by the system in 1975, out of a total of 10,000 newcomers to the labour market, and by 1981 the service will be employing 103,000 people as against 75,000 today and 66,000 in 1972. Between 1960 and 1973, 581 rationalization studies were carried out at county level, usually selected at random, in order to solve short-term problems, and run on a minimum budget. The term 'efficiency' is defined as 'goal fulfillment' divided by 'resources expended': in other words, it is necessary to have an aim before one can measure (and increase) efficiency. The health services have increased their activities without increasing their efficiency. Recent legislation seeks to increase efficiency, e.g. by decreeing that patients should always be treated at the lowest effective level of care. This is achieved by county- or nation-wide co-ordination measures. Industrial experience must be drawn on to a much greater extent in administration and technical functions. This is the responsibility of the top

administrative leadership, who must continually aim to make the most effective use of organizational structure, personnel administration, methods of working, technological aids, quality of organization, levels of expertise, flexibility, and planning capacity. In this they must be assisted by the Central Association of Local Authorities, where necessary co-ordinated by the Board of Health.

RUNNING COSTS

See also Abstract Nos. 1571, 1646

1574. JEFFERS, J. R. and SIEBERT, C. D. **Measurement of hospital cost variation: case mix, service intensity, and input productivity factors.** *Health Services Research*, Chicago, 1974, vol. 9, no. 4, pp. 293-307.

This paper outlines a broad theoretical approach to measuring real cost-per-case differences arising from differences in case mix, service-intensity, and input productivity. Modifying the method in the interests of accommodating current lack of access to hospital data pertaining to diagnostic case mix, the authors apply it to data from three Connecticut hospitals for the period 1960 to 1969. They find both nominal and real changes in cost per case due to changes in factor input prices, gross service intensity and factor input productivity.

1575. SHOOS, K. J. and KRIZELMAN, S. L. **Multifaceted program contains costs.** *Hospitals*, Chicago, 1975, Aug. 1, vol. 49, no. 15, pp. 41-43.

In March 1973, the administration of the 427-bed Saint Luke's Hospital, Cleveland, was reorganized to provide a corporate form of management that allowed closer administrative direction and control. A massive cost containment programme was initiated in August 1973 to reduce costs by at least $500,000 between 1 October 1973 and 30 September 1974. During this period there was a 10 per cent reduction in the number of staff (146 full-time equivalents) and the in-patient per diem cost increased by only 0.07 per cent. The measures taken to ensure the success of the programme were: (i) a freeze was placed on recruitment of staff except where direct patient care would be affected; (ii) overtime had to be approved by the appropriate associate director; (iii) a 'phase down' plan was developed with selective lay offs and reduction of hours in various areas of the hospital; and (iv) no vacation relief staff were employed. A wide range of departmental changes were also effected for more efficient use of manpower and resources. The hospital is now concentrating on reducing non-salary costs.

1576. LARIVIÈRE, R. Considérations analytiques sur l'augmentation des coûts des soins en établissement au Québec et au Canada. **[Analysis of increasing health care costs in Quebec and Canada.]** *Dimensions in Health Service*, Toronto, 1975, Aug., vol. 51, no. 8, pp. 49-52; English summary p. 53.

Comparison of increases in hospital costs in Quebec and in the rest of Canada reveals that: (i) increasing population is not a factor in cost increases; (ii) the rate of increase in Quebec is below the national rate, 12 per cent compared with 14 per cent; (iii) the per capita cost in Quebec is lower than in the rest of Canada; (iv) the average

increase in health care costs in Canada between 1970 was above the increase in the gross national product (GNP) but the increase in the cost of institutional care was below the increase in the GNP; (v) the increase in the number of patients is far above the increase in population, particularly in Quebec; (vi) increased use has partly been possible through a decrease in the average length of stay, this decrease being greater in the rest of Canada than in Quebec; (vii) the occupancy rate has been rising in Quebec, while it has remained stable in the other provinces; (viii) the number of patients admitted per 1,000 population has remained much lower in Quebec but the difference tends to be decreasing; (ix) the number of institutional facilities remains higher in other Canadian provinces than in Quebec; and (x) the increase in emergency visits in Quebec has been double that in other provinces. [This abstract has been prepared from an English summary of the paper.]

1577. COPPINI, G. Una 'funzione economica' per il controllo e la ripartizione della spesa ospedaliera. **[An 'economic function' for the control and allocation of hospital costs.]** *Problemi della Sicurezza Sociale*, Roma, 1975, March/April, vol. 30, no. 2, pp. 215-235; summaries in French, English, German and Spanish pp. 236-237.

Health service expenditure is already rising so fast that in a short time it could lead to situations incompatible with orderly economic development. The costs showing the most rapid increase are those for hospital care and they are the most difficult to control. A sample of state hospitals is taken in an endeavour to establish an evaluation system that attributes a fair 'economic weight' to each hospital. For the system to be valid, the range of services provided by the individual hospital must be taken into consideration. By establishing a dependence relationship of the main items of expenditure on three variables, capacity, use and intensity, it is demonstrated that an 'economic function' able to determine the overall theoretical expenditure can be established. The 'economic function' system may be adopted not only in the budgeting and accounting phases of the individual hospital's finances, but also in the regional control and distribution of funds. [This abstract has been prepared from an English summary of the paper.]

BED OCCUPANCY, ECONOMIC USE OF BEDS

See Abstract No. 1667

EMERGENCY ADMISSION, EMERGENCY BED SERVICES

1578. GRANT, A. P. **The problems of acute medical units in an emergency bed service.** *Hospital and Health Services Review*, London, 1975, Sept., vol. 71, no. 9, pp. 299-303.

In Belfast the emergency bed service (EBS) has developed so completely that it has become responsible for arranging almost all the general medical admissions to the major teaching hospitals. This paper examines the operation of this example of a flow-orientated management problem and contrasts its objectives with the major

difficulties at ward level in fulfilling them. In attempting this task a simple analytical model is formulated and the crude annual EBS statistics between 1972 and 1974 upon which it is based are presented. It then becomes possible to identify the problems of the Belfast EBS rota. Finally a general comparison is made with data from the various English regions in 1973 in terms of the two major variables of length of stay and bed occupancy with availability of long-stay beds.

DATA PROCESSING

See also Abstract Nos. 1585, 1586, 1611, 1618, 1626, 1636, 1642, 1644, 1666

1579. BALL, M. J. and HAMMON, G. L. **The emerging mini-computer in hospital information networks.** *CRC Critical Reviews in Bioengineering*, Cleveland, 1975, Jan., vol. 2, no. 2, pp. 179-182.

This paper defines and discusses a plan for the development and implementation of computer systems in hospitals. It involves the use of individualized functional systems built around minicomputers to more adequately serve the actual needs of discrete functions, the most likely areas being medical records, admissions, pharmacy and laboratory. Each area can be implemented independently of each other as one area becomes ready to be computerized. The individual systems can then be linked in a basic ring network.

1580. COLLEN, M. F. and others. **Functional goals and problems in large-scale patient record management and automated screening.** *Federation Proceedings*, Bethesda, Md., 1974, Dec., vol. 33, no. 12, pp. 2376-2379.

Kaiser-Permanente Medical Care Program currently owns and operates 11 hospitals and 15 out-patient facilities in the San Francisco-Bay area and serves one million persons. Following analysis of the Program's activities it was decided to direct computer applications in the first place to the health checkup area of the out-patient department and to the information handling problem in the hospitals. Ten years of experience of computerized multiphasic health screening have demonstrated the value of this approach. A computer-stored, integrated medical record was essential to the functioning of a computerized medical data system. Brief details are given of the system, together with some information on costs.

1581. SCHMITZ, H. H. **Evaluation of health information systems.** *CRC Critical Reviews in Bioengineering*, Cleveland, 1975, Jan., vol. 2, no. 2, pp. 209-215.

A protocol for the evaluation of health information systems is presented. Evaluation is seen as a two-dimensional phenomenon. One dimension is the time frame in which it is conducted, certain items being evaluated before the system is installed and others afterwards. The second dimension focuses on the items that one needs to evaluate. These fall under three headings: economic evaluation; the impact of the system on patient care; and evaluation of staff attitudes. Items which may be included under these headings are suggested and discussed. The importance of the various items will depend on the individual organization.

1582. SJUKVÅRDENS OCH SOCIALVÅRDENS PLANERINGS- OCH RATIONALISERINGS-INSTITUT. Datasystem för lagring av sjukvårdsadministrativ information—förstudie—del 1. **[Computer system for storing health service administrative information—preliminary study—part 1.]** (Spri rapport 20/74) Stockholm, Spri, 1974, 45pp.

Spri's commitments on electronic data processing are directed towards a number of discrete systems which periodically provide concentrated information to a common data base. This report offers a foundation, which until now has been lacking, for economic and other considerations on the implementation of data base systems. The report is in eight parts: introduction; the data base concept; data storage; solution alternatives; data structures; tape archives; presentation of a summary of data on medical care; and economic considerations. A list of 89 references to the literature is included. [This abstract has been prepared from an English summary of the report.]

MEDICAL RECORDS

See also Abstract Nos. 1580, 1649, 1666

1583. LINKERT, M. **Nurses can improve data collection.** *Dimensions in Health Service*, Toronto, 1975, Sept., vol. 52, no. 9, pp. 32, 34.

The medical record is becoming the chief criterion of good patient care instead of the communicative tool for which it is designed. The problem-oriented medical record has greatly improved the charting system, but it still has some drawbacks. Hospitals should research different systems and perhaps design their own individual style. Six basic points could be used in the present patient medical record systems: quality, simplicity, scientific methodology, accuracy, decreased data duplication and experimentation. Each of these is discussed.

1584. O'SULLIVAN, D. D. **Evaluation of the medical record.** *Medical Trial Techniques Quarterly*, Mundelein, 1975, vol. 21, no. 3, pp. 249-270.

This paper discusses the proper evaluation of the medical record in legal cases. Such evaluation is a task for a properly oriented physician who is able to assist the attorney in the interpretation of the information present in the record, and the information that appears to be missing from it. There are, however, many areas of record review that the attorney can and should undertake to assure the completeness of the records at hand. The various components of the record are dissected and their function and purposes are outlined.

1585. BARKMAN, B. and WHITE, W. C. **Computer coding of reports in two languages.** *Dimensions in Health Services*, Toronto, 1975, Sept., vol. 52, no. 9, pp. 38-40.

A research team of doctors, medical record officers and computer technologists has been working in Sherbrooke, Quebec, and Bethesda, Maryland, on a computer system which will code pathology reports automatically in French or English. The coding system used is the systematized nomenclature of pathology (SNOP). This paper discusses the advantages of a coding system, the concepts on which this system is based, the SNOP statement, the SNOP dictionaries and matching.

1586. GLUECK, B. C., ERICSON, R. P. and STROEBEL, C. F. **Use of a psychiatric patient record system.** *Federation Proceedings*, Bethesda, Md., 1974, Dec., vol. 33, no. 12, pp. 2379-2384.

This paper describes the development of the computerized medical record system now in use at the Institute of Living, Hartford, Conn., a 400-bed psychiatric hospital. The system uses two Digital Equipment Corporation PDP-15 computers. The scope of the data base, plans for the expansion of the system and examples of its use in different types of enquiry are presented. These provide useful examples of the flexibility, relative simplicity and speed, in terms of response time, that a good computer-based patient information system can provide. A schematic diagram of the system and examples of the printout are included.

1587. DRAPER, W. **Introduction of the problem-oriented record into a child psychiatric hospital.** *Journal of the American Academy of Child Psychiatry*, New York, 1975, vol. 14, no. 1, pp. 125-131.

The Virginia Treatment Center for Children has 40 beds for children aged from five to 16 years and specializes in short-stay, intensive, residential treatment of psychiatric disorders of children. This paper discusses the experience of introducing problem-oriented medical records in the centre. Many advantages of the system are noted; the only minor drawback has been the poor handwriting of the staff.

1588. **Henry Ford Hospital's microfilm records system.** *Office*, Stamford, Conn., 1975, July, vol. 82, no. 1, pp. 80, 107.

The medical records department at Henry Ford Hospital, Detroit, contains more than 1½ million records with more than 12,000 transactions a day, including processing record requests and filing loose reports. Results of early tests of microfilming in 1950 were unsatisfactory and no further microfilming was done until 20 years later when the records of all patients who died up to 1970 were microfilmed. Today, records of deceased patients are kept for one year on paper, then microfilmed. The department also microfilmed its master patient index file up to 1971. Consideration is being given to microfilming all records that have been inactive for more than seven years. Copies of the fiche would be sent in response to requests; about 100 additional microfilm readers would be installed throughout the hospital. This would reduce paper storage by 60 per cent and eliminate the basement files.

FINANCE AND ACCOUNTING

See Abstract No. 1570

FINANCE

1589. BRAGG, E. B. and HORWITZ, R. M. **Financial management by objectives.** *Hospital Financial Management*, Chicago, 1975, July, vol. 29, no. 7, pp. 20-23, 26.

It is essential for hospitals to develop a system which effectively monitors their

financial activity. One monitoring system that has been tried is ratio analysis but the ratios suitable in industry are not really applicable to the health care sector. One solution would be to devise a set of dynamic financial ratios which would identify potential or actual problem areas in hospital finance. Ratios allow the analyst to measure financial performance and condition and compare the results with some free-standing standard. The ratio must be interpreted by comparison. Common bases of comparison are historic, industry experience and internal standards, the last generally being the most useful. Management by objectives has improved the performance of staff and there seems no reason why the same philosophy cannot be extended to finance. Financial standards of performance could be set to cover the balance sheet income statement and composite ratios. Data for their computation should be readily available from the hospital's books and records. Each hospital must set its own objectives based on its special needs.

1590. Les budgets de service. **[Unit budgets.]** *Hôpital à Paris*, Paris, 1975, March/April, no. 26, pp. 117-170.

The feature contains seven papers and a report of a round table discussion on unit or departmental budgeting. The papers are on: mastering the rise in costs—a crucial and unresolved problem; the instruments of budgeting; computer-produced information; the connection between the budget and budgetary activity; a project by students of the National School of Administration; an experimental unit budget at Antoine-Béclère Hospital; and after unit budgets.

HOSPITAL ACCOUNTING

See also Abstract Nos. 1594, 1626

1591. FREITAG, W. **The hospital audit committee.** *Trustee*, Chicago, 1975, July, vol. 28, no. 7, pp. 26-28.

An audit committee increases trustees' knowledge of the nature and scope of the audit function, provides them with direct contact with auditors and management and thus improves their understanding of financial information. An audit committee is a standing committee of the governing board. It generally functions best with three to five members all of whom should be outside directors. Its responsibilities should include reviewing significant financial information to ensure its accuracy and ensuring an effective accounting and internal control system. The audit committee should meet at least twice a year. The following activities should be included in its charter: (i) an annual review of the audit plan by an independent auditor; (ii) review of the annual report and results of the annual examination with management and the independent auditors; (iii) direct relationship with the internal auditing system where such exists; (iv) review of information provided to the community for purposes such as fund raising; (v) recommending to the board a firm of independent auditors; and (vi) evaluation of the appropriateness and timeliness of the internal financial and statistical reporting and the assessment of the budgeting function and the adequacy of security relating to computer systems.

SUPPLIES AND STORES

SUPPLIES

1592. SJUKVÅRDENS OCH SOCIALVÅRDENS PLANERINGS- OCH RATIONALISERINGSINSTITUT. Materielkodifiering: förbrukningsartiklar. **[Codification of supplies: consumable supplies.]** (Spri råd 6.15) Stockholm, Spri, 1975, 40pp.

This paper presents a coding system for supplies with two purposes: classification and item identification. The classification code consists of a number of commodity groups with a three-part digit code. The item identification code consists partly of an item designation with 30 positions and partly of an item number with a maximum of six digits and based on a consecutive number system. [This abstract has been prepared from an English summary of the publication.]

ECONOMIC USE OF SUPPLIES, DISPOSABLES

1593. MORRISON, M. and MOORE, R. V. **Single-use clinical thermometer.** *Nursing Mirror*, Sutton, Surrey, 1975, Sept. 4, vol. 141, no. 10, pp. 67-68.

A new single-use chemical thermometer is based on a completely new principle which uses a series of precise, temperature-sensitive dots that turn blue to give a sharp clear reading. The last dot to have changed colour indicates the temperature. The thermometer contains no mercury, but has about 0.003 g. of proprietary chemicals, sandwiched in non-sensitizing and unbreakable plastic layers. Extensive studies have shown that it is safe; it is sterilized by gamma radiation. A study of the use of the thermometer carried out by student nurses at the South Edinburgh School of Nursing showed that: (i) it required only 60 seconds in the mouth compared with the three minutes of a conventional glass thermometer; (ii) its accuracy was just as high as that of the conventional thermometer; and (iii) the pattern of temperature with time of day was, overall, as expected, but with a large amount of variability about this pattern.

CATERING, DIETETICS, KITCHENS

HOSPITAL CATERING

1594. MONTAG, G. M. and OLSEN, M. D. **Obtaining meaningful cost information in dietary departments.** *Journal of the American Dietetic Association*, Chicago, 1975, July, vol. 67, no. 1, pp. 50-59.

The need to monitor staff and food costs in order to provide adequate food at minimum expense is stressed. Four methods of determining food costs are described and their advantages and disadvantages are discussed. Both direct and indirect staff costs must be assessed; much of the information is already available and only requires proper analysis. Staff costs need to be related to performance. Six methods for doing

this are outlined; meals served per employee hour; employee minutes per meal served; payroll cost per day; payroll cost per meal served; staff cost per day; and staff cost per meal served.

DIETETICS IN THE HOSPITAL

1595. KOCHER, R. E. **Monitoring nutritional care of the long-term patient. I. Policies and systems that support the on-going evaluation of care.** *Journal of the American Dietetic Association*, Chicago, 1975, July, vol. 67, no. 1, pp. 45-46.

The background to monitoring nutritional care is discussed as a means of quantitatively assessing catering management as a part of total patient care. Special procedures involved include: (i) techniques for weighing patients and recording their weights; (ii) a method for informing the medical and dietetic services of weight changes; (iii) a method for observing and reporting food intake and barriers to adequate food intake; and (iv) a method for implementing changes in care plans.

1596. POLEMAN, C. M. **Monitoring nutritional care of the long-term patient. II. Experiences at the Mercy Health and Rehabilitation Center, Auburn, New York.** *Journal of the American Dietetic Association*, Chicago, 1975, July, vol. 67, no. 1, pp. 47-50.

A nutrition consultant, with a staff of three dietary technicians and six diet clerks, is part of the multidisciplinary team in a 300-bed nursing home. A nutritional profile worksheet (a sample of which is reproduced) is completed for all new patients; this is the basis of the nutritional consultant's evaluation presented at rehabilitation meetings. Most of the information is collected by the dietary technicians and diet clerks, who also complete meal check forms after each meal. These forms are used for a quantitative assessment of food intake at periodic meetings of dietary and nursing staff. Education and research into nutritional care are also carried out in the centre.

KITCHENS

See Abstract No. 1539

CANTEENS, STAFF DINING-ROOMS

1597. FREEMAN, R. **Quality food service to staff and visitors.** *Hospital Administration in Canada*, Don Mills, Ont., 1975, July, vol. 17, no. 7, pp. 20-24.

The hospital's obligation to provide a food service to staff and to visitors is not entirely the same, since staff will require an adequate food service on a 24-hour basis, whilst the provision of food and drinks for visitors, though an important public relations gesture, is clearly not necessary on the same basis. The quality of food, the way it is served and the surroundings in which it is provided are important factors in developing a good service. Cost both of meals and of providing services must also be reasonable if good use is to be made of the service. Few hospitals can afford a waitress service, so that cafeteria and/or vending machine facilities are usual. The latter in

particular can provide a 24-hour service with minimum staff supervision. Decisions concerning the provision of subsidized meals for staff need to be weighed against the extra expense incurred. Various methods of increasing variety in menus are described, such as the provision of a more expensive 'gourmet meal' as well as the usual menu, and the provision of a different ethnic menu at regular intervals, reflecting the different nationalities of staff. Such schemes, if finances allow, can help provide an improved service provided they are adequately planned by the hospital's food service administration and financial administration.

LAUNDRIES AND LINEN SERVICE

LAUNDRIES

1598. PERTL, D. **Pillows—purchasing and processing tips.** *American Laundry Digest*, Chicago, 1975, May 15, pp. 28, 30-31.

Four currently available methods of handling pillows are discussed: (i) simple laundering and drying in a tumbler—the least preferred method; (ii) remove ticking from pillows, place the urethane or feathers into a sanitizing unit, wash the ticking and refill it—an acceptable but expensive alternative; (iii) use of disposable pillows—also expensive; and (iv) use of a vinyl-coated pillow that can be left on the patient's bed and treated exactly the same as the mattress—the preferred method. Factors involved in purchasing pillows include thickness, flammability, form, pliability, odour, sound, colour and breathability.

HOSPITAL LINEN AND TEXTILES

See Abstract No. 1598

HYGIENE IN THE HOSPITAL

HOSPITAL INFECTIONS

See Abstract Nos. 1555, 1641

SOURCES OF INFECTION

1599. JOYNSON, D. H. M. and others. **Contamination of fluids from a hospital pharmacy.** *Journal of Hygiene*, London, 1975, Aug., vol. 75, no. 1, pp. 87-90.

The method used at the University Hospital of Wales for monitoring the sterility

of non-injectable fluids is described including details of sterilization and the visual dye and bacteriological tests used. The results are tabulated and show contamination of 3.4 per cent of bottles using the visual dye test and 6.1 per cent of the remaining bottles using bacteriological tests. The contaminant was found to be a non-specific coryneforme which was traced to the spray cooling system of the sterilizer. The only way of eliminating this contamination is by avoiding the use of spray-cooling. If an increase in throughput by use of a spray-cooling water system is required, then the risk of contamination of some bottles has to be accepted. The design of an improved method of closure of sterile bottle fluids for both topical and intravenous use must be considered as a matter of urgency.

1600. VANHEGAN, R. I. and MITCHELL, R. G. **Pseudomonas infection associated with contamination of wick-type air freshener.** *British Medical Journal*, London, 1975, Sept. 20, vol. iii, p. 685.

During a routine bacteriological survey in a maternity hospital, four babies in a special care baby unit were carrying a strain of *Pseudomonas aeruginosa* that had not been isolated previously in the hospital. A wick-type air freshener was suspected when an attendant was seen to change a baby's napkin and immediately raise the wick of the bottle before washing her hands. Strains of the same pyocine type were isolated from air freshener bottles in the infected babies' cubicle. Several bottles in the nursery yielded Gram-negative organisms other than *Ps. aeruginosa*. In further surveys, *Ps. aeruginosa*, with other Gram-negative bacilli, were isolated from air fresheners throughout a general hospital. Though unproved, the bottles may have been directly implicated in cross infection and they should not be used in intensive care units and similar places. The practice of topping-up existing bottles from a stock solution should be discouraged.

PREVENTION AND CONTROL

1601. ASSOCIATION FOR PRACTITIONERS OF INFECTION CONTROL. **Proceedings of the first North American eastern conference on infection control.** Toronto, Association for Practitioners of Infection Control, 1974, xviii, 258pp. $10.00.

The Association for Practitioners of Infection Control was established in November 1972 as a multidisciplinary organization for all staff involved in infection control activities. These proceedings of its first conference contain 23 papers covering a wide range of topics including infection control nurses, surveillance, hexachlorophane and smallpox.

1602. BODEY, G. P. **Isolation for the compromised host.** *Journal of the American Medical Association*, Chicago, 1975, Aug. 11, vol. 233, no. 6, pp. 543-545.

Gram-negative bacillary infections are a special threat to patients with impaired host-defense mechanisms. Reverse-isolation has been an accepted technique for protecting compromised hosts from acquiring hospital infections, but the effectiveness of these measures has not been demonstrated by careful studies. The objections to reverse isolation are outlined. Recently, interest has arisen in protected environment

units for compromised hosts—plastic tent isolators and laminar air flow rooms—but the efficacy of these units has been a subject of controversy. The combination of protected environment units and prophylactic antibiotics (PEPA) has been studied most extensively in patients undergoing treatment for acute leukaemia. Despite the encouraging results of these studies, widespread use of laminar air flow rooms cannot be recommended at present for general hospitals where compromised hosts are admitted infrequently. The expense of a PEPA programme is considerable. Simpler procedures for the general hospital are suggested.

1603. AYLIFFE, G. A. J. and others. **Disinfection of baths and bathwater.** *Nursing Times*, London, 1975, Sept. 11, vol. 71, no. 37, ICNA suppl. pp. 22-23.

Hospital baths and bathwater are often contaminated with potentially pathogenic bacteria which may be transferred to other patients. Tests were made with the following solutions added to approximately 30 gallons of bathwater of staff or patients at a mean temperature of 39°C: (i) an iodophor solution containing 4.5 per cent available iodine (Steribath); (ii) a solution containing cetrimide (15 per cent) and chlorhexidine (1.5 per cent), Savlon bath concentrate; and (iii) a 4.5 per cent solution of Irgasan DP300. The most consistent reduction in viable counts was obtained with Steribath. It is recommended that antiseptic solutions should not be used as a routine, but may be of protective value for patients bathing with uninfected open wounds, and will reduce dissemination of organisms from patients with infected wounds or lesions. Steribath is probably the preferred preparation owing to its activity against staphylococci and Gram-negative bacilli at the dilution used in bathwater.

1604. TUKE, W. **Hibiscrub in the control of staphylococcal infection in neonates.** *Nursing Times*, London, 1975, Sept. 11, vol. 71, no. 37, ICNA suppl. p. 20.

A number of disinfectants were tried as an alternative to hexachlorophane in a special care nursery, but the prevalence of staphylococcal infection remained disturbingly high. A trial of Hibiscrub soon brought about a marked reduction in the signs of infection. Two squirts of Hibiscrub (10 ml.) were added to the water used for bathing babies (this gave a final concentration of Hibiscrub of one in 80). For topping and tailing one in 40 Hibiscrub was issued from the pharmacy and another type of dispenser was used to deliver a suitable quantity of this dilution into a gallipot before use. The new regimen has proved successful and no sensitivity reactions have occurred.

1605. MALONEY, M. H. **Chlorhexidine: a hexachlorophane substitute in the nursery.** *Nursing Times*, London, 1975, Sept. 11, vol. 71, no. 37, ICNA suppl. p. 21.

A 14-month trial of Hibiscrub, a product containing chlorhexidine in a detergent base, as a substitute for hexachlorophane is described. A 10 per cent solution containing four per cent isopropyl alcohol was used. The bathing procedure was exactly the same as with the hexachlorophane product. In the 3,500 babies who participated in the trial, no reactions have been noted and no difficulties reported, except that the 10 per cent dilution may still lack a little detergency. Equally important, no clinical evidence of staphylococcal infection has been noted over the period. Bacteriological studies are to be instituted shortly. A five-month trial involving 500 babies has been made with a powder containing one per cent hibitane hydrochloride with three per

cent zinc oxide for cord treatment; it has proved a slight improvement on hexachlorophane powder.

HYGIENE IN THE OPERATING THEATRE

1606. WEBSTER, D. J. T. and DAVIS, P. W. **Closure of abdominal wounds by adhesive strips: a clinical trial.** *British Medical Journal*, London, 1975, Sept. 20, vol. iii, pp. 696-698.

In a randomized trial of wound closure in 512 abdominal wounds, wounds were closed with either reinforced Steristrip skin closures or interrupted silk sutures. Comparisons were made of wound pain and discomfort, wound infection, discharge, redness, width and skin reaction. The causes of peeling of the tapes were assessed. The results showed that tapes were significantly more comfortable and that patients preferred them to sutures, but wide scars occurred more often. There was no difference in rates of wound infection and no case of allergy to the tapes was seen. Closure of abdominal wounds by these tapes is a satisfactory procedure that could be used more extensively.

1607. BRADY, L. P. and others. **The effect of operating-room environment on the infection rate after Charnley low-friction total hip replacement.** *Journal of Bone and Joint Surgery*, Boston, Mass., 1975, Jan., vol. 57A, no. 1, pp. 80-83.

After 300 Charnley low-friction arthroplastics done in two hospitals by two surgical teams using clean air enclosures but no pre-operative, operative or post-operative antibiotics, there were three deep wound infections, two caused by *Staphylococcus albus* and one by Klebsiella. Two of these infections occurred in hips previously operated on and one was in a hip with no previous surgery. These findings suggest that two operating theatre environments using the same basic principles without antibiotics can achieve a one per cent rate of deep wound infections after total hip replacement, a rate comparable to that reported in other series in which antibiotics were used. However, the study leaves unanswered a number of questions relating to the reason for the low infection rate.

SAFETY MEASURES

ACCIDENTS IN GAS AND DRUG ADMINISTRATION

1608. SPINK, J. **Medication errors in hospitals.** *Medical Trial Technique Quarterly*, Mundelein, 1975, vol. 21, no. 3, pp. 271-296.

Current research has shown that medication errors are much more prevalent than is generally thought. This paper attempts to outline the various systems within the realm of drug distribution. These systems include distribution, communications, record-keeping, and the actual process of administering the drug. It also gives examples of possible errors, their possible consequences and the law in relation to these medication errors. General types of errors are also outlined.

THE PATIENT

ADMISSION AND RECEPTION

See also Abstract No. 1578

1609. BUHAUG, H. Innleggingssentraler for akuttsykehus. **[Admissions centres for acute hospitals.]** *Norsk Sykehustidende*, Oslo, 1975, Aug., vol. 48, no. 8, pp. 147-152.

The Norwegian Parliament has proposed that each county should set up a co-ordinating admissions centre; the Department of Social Services has modified this proposal to cover heavily populated areas with more than one hospital. Whether a county has an admissions centre or not, a series of questions must be answered before it is decided which hospital a patient should enter: available alternatives; their medical adequacy; cost of the various alternatives; length of waiting lists for each alternative; where patient has been treated before and where he can be expected to be treated in future; facilities offered to patient's own doctor at the various hospitals; and distance to patient's home. The effects on waiting lists of administering five 30-bed wards as one 150-bed admissions unit are nil: the numbers of patients and beds are unchanged. If emergency cases (about half of all cases) are always admitted to the nearest hospital, the remaining waiting list patients come onto a list five times as long as before, but with added flexibility and speed of admission. However, long waiting lists: (i) motivate doctors to find alternative methods of treatment; and (ii) motivate hospitals to discharge patients rapidly and increase bed availability (the 'pressure factor'). This factor is felt most by wards with individual rather than shared (county) waiting lists. An alternative course of action to investing in an admissions centre would be to invest in a modest increase in numbers of beds. These and similar factors need analysing in depth before plans are finalized.

1610. CHESHIER, B. L. **Direct admission.** *Texas Hospitals*, Austin, 1975, Aug., vol. 31, no. 3, pp. 10-16.

At Harris Hospital, Fort Worth, Tex., patients now go directly to a nursing station and on to their rooms for the check-in procedure, thus relieving them of a long wait in the lobby. Direct admission began as a pilot programme on three floors, but was extended to the whole hospital following favourable staff reaction. The procedure followed is described with particular reference to the roles of the various staff involved in the admission procedure.

1611. CROOK, W. J. and SYRETT, D. **Computerized admissions mean automatic efficiency.** *Dimensions in Health Service*, Toronto, 1975, Sept., vol. 52, no. 9, pp. 26-28, 30.

In November 1975, Wellesley Hospital, Toronto, will begin using its admission transfer and discharge (ATD) computer program, the first phase of a long-range programme to provide a computer communication network to carry patient information. It will run parallel with the manual system until January 1, when the hospital will leave the manual system. The ATD program will produce seven daily, one weekly

and eight monthly management control reports, while reducing the admission department's operating costs by about $18,024. The ATD program, with few modifications, could be introduced in virtually any Canadian hospital. Information is entered on a terminal operating off-line, transmission of data to the computer taking place at the end of the day's transactions. Processing goes on during the night and the five daily reports are transmitted back to the admission department by 0700. Monthly reports will be available on the second day following the month end. Some details of the system and its future development are given.

WELFARE OF THE PATIENT

See also Abstract Nos. 1546, 1616, 1627, 1648, 1651-1653, 1655, 1659, 1660, 1668, 1670, 1672

1612. FOST, N. C. **A surrogate system for informed consent.** *Journal of the American Medical Association*, Chicago, 1975, Aug. 18, vol. 233, no. 7, pp. 800-803.

Since 'informed consent' is frequently obtained in a clinical setting where the patient is anxious and overwhelmed with feelings toward the physician of awe. trust and despondency, it is often of dubious value in protecting patients. The authors devised, as a possible alternative mechanism for uncovering patient views toward a specific research protocol, a surrogate system of consent. The surrogates' responses seemed more candid and diverse than the responses one usually hears in the 'real' clinical setting. Potential applications of such a system lie in further study of the consent process, and as a means for individual investigators to better gauge consumer attitudes towards specific projects.

VOLUNTARY SERVICE, VOLUNTARY WORKERS

See Abstract No. 1673

THE GENERAL PRACTITIONER AND HIS PATIENTS

See also Abstract No. 1633

1613. DURKIN, C. J. and EDWARDS, A. **Referral letters from general practitioners.** *Journal of the Royal College of General Practitioners*, Edinburgh, 1975, July, vol. 25, no. 156, pp. 532-536.

This paper reports the results of a survey carried out in July 1974 at King's College and St. Giles' Hospitals, London. The aim was to examine the case notes of patients in surgical, medical and other specialized wards to see whether a letter of referral from a general practitioner was included, and if so to examine this with regard to information content, opinion expressed and presentation. Results showed only 48 per cent (208 cases) of case notes contained general practitioner's letters relevant to the admission; 96 letters contained instructions requesting specific treatment, and 112 were requests for tests or other advice. The majority of letters contained a suggested diagnosis, and

in most cases this agreed with the hospital diagnosis, although there was a higher correlation in surgical than in medical cases. Letters containing a diagnosis were also more likely to contain a relevant patient history, which is very useful for the subsequent treatment of the patient. There were 67 letters which were barely legible, and these were less likely to contain a patient history. The lack of a referral letter indicates in many cases that patients may have approached the hospital direct. Information contained in referral letters is evidently variable, and some letters may be virtually useless if they are also illegible.

TRANSPORT OF PATIENTS

See also Abstract No. 1669

1614. OXER, H. F. **Aeromedical evacuation of the seriously ill.** *British Medical Journal*, London, 1975, Sept. 20, vol. iii, pp. 692-694.

Almost any patient may be carried by air, but air transport introduces some special problems owing to the effects of altitude, noise, turbulence, and the special environment. Because of these factors it is important to know when considering a patient's suitability for air transport the type of aircraft to be used, the flight profile (its duration and expected cabin altitudes) and the facilities available on board. It is essential to carry all equipment (as simple and as portable as possible), drugs, and diets that may be needed, and to be sure that all the skills and nursing help needed to deal with any possible problems are available.

1615. HOFGAARD, K. C. Endel synspunkter på ambulansetjenesten fra en administrativ synsvinkel. **[Some views on ambulance services from the administrative angle.]** *Norsk Sykehustidende*, Oslo, 1975, Aug., vol. 48, no. 8, pp. 161-165.

The ambulance services in Norway, formerly privately operated except in the two big cities (e.g. by the Red Cross), are gradually becoming a public (county) responsibility. County planning will have to cover training, equipment, telecommunications and standardization. Although ambulance crews will in future co-operate more closely with hospital staff, drivers will not be expected to operate electrocardiographs, give intubations or intravenous injections, or operate a defibrillator. They are, however, required to prevent haemorrhage and suffocation and carry out resuscitation. Training must also cover helicopter and aeroplane work. Communications are divided between ordinary mobile telephones and private VHF networks. County ambulance services will have to co-ordinate the various systems so as to be able to direct and control all their ambulances.

HOSPITAL CARE

See also Abstract Nos. 1649, 1654, 1655, 1662, 1674, 1675

1616. HAEFLIGER, E. and ELSASSER, V., editors. Krankenhausprobleme der Gegenwart. Band 7. Der Kranke und seine Betreuer im Zentrum der Hospitalisation. **[Present day hospital problems. Vol. 7. The patient and his care at the centre of hospitalization.]** Bern, Huber, 1974, 275pp.

The papers in this volume are concerned with problems of patient care and methods

of achieving the best combination of humanitarianism, economy and efficiency therein. Particular attention is paid to feelings of anxiety and aggression in both patients and staff and the difficulties which may require solving following discord between colleagues. The need for good leadership and teamwork is emphasized. Later sections deal with: (i) varying needs in patient admission in general and psychiatric hospitals and in the avoidance of admission; (ii) the special problems of intensive care staff; (iii) special problems of both staff and patients in haemodialysis units; (iv) medical, therapeutic, design and equipment problems of the disabled; and (v) special after-care problems of psychiatric, diabetic and tuberculosis patients.

1617. HARGREAVES, I. **The nursing process: the key to individualised care.** *Nursing Times*, London, 1975, Aug. 28, vol. 71, no. 35, occasional papers pp. 89-91.

From a review of previous literature the nursing process is considered to be the application of nursing skills to care for patients. It has been variously broken down into a number of stages covering assessment of the nursing problems of a patient and setting nursing objectives, planning and execution of a care plan and its evaluation. It is considered to be applicable to all nursing situations and is an attempt to put the theory of individual patient care into practice.

1618. GOODWIN, J. O. and EDWARDS, B. S. **Developing a computer program to assist the nursing process: phase 1—from systems analysis to an expandable program.** *Nursing Research*, New York, 1975, July/Aug., vol. 24, no. 4, pp. 299-305.

The project described represents the first part of a three-phase study. The initial phase concentrated on development of basic concepts and models leading to the creation of a computer program to formulate nursing diagnosis in a limited area of patient functioning. It was conducted in three stages. In the first a definition of nursing was developed on which a systems model of the nursing process was constructed. In Stage II the computer program was written to collect patient data and formulate nursing diagnosis related to functions of the skin, mucous membranes, nails and hair. A simplified flow chart illustrates its basic structure. It was intended to serve as a model for a more comprehensive program covering other functional areas, suggest patient objectives and nurse intervention and help to evaluate nursing care. In Stage III trials were conducted to obtain feedback from nurses. Most nurses needed slightly more than an hour to use the program and considered this too long. The detailed prompting of the nurse by the program is a major factor in the time taken but it is important because it encourages thoroughness in assessment. Some modifications and expansions are suggested which would make it possible for the nurse to complete an entire assessment of a patient in about an hour.

1619. LINN, M. W. and LINN, B. S. **Narrowing the gap between medical and mental health evaluation.** *Medical Care*, Philadelphia, 1975, July, vol. 13, no. 7, pp. 607-614.

Some of the problems facing evaluators of medical care have been dealt with by individuals examining mental health programmes. Mental health research has focused more on outcome studies that include a multidimensional approach to evaluation. Techniques have been devised in that field that make the evaluative process patient specific and goal oriented. Borrowing some of these methods to make medical care

evaluation include a problem-oriented outcome, which incorporates patient satisfaction, compliance with medical treatment, and relief of symptoms, could lead to more accurate data on the health delivery system.

1620. BLOCH, D. **Evaluation of nursing care in terms of process and outcome: issues in research and quality assurance.** *Nursing Research*, New York, 1975, July/Aug., vol. 24, no. 4, pp. 256/263.

Three classical frameworks for evaluation of patient care are: (i) structure—factors relating to facilities, staffing, etc.; (ii) process—what the care giver does; and (iii) outcome—the results of care in terms of changes in the patient. A model of the components in patient care evaluation is described and illustrated. Experts debate whether evaluation should be process-focused or outcome-focused, but there is a third type in which the study of process is related to the study of outcome. These three types of evaluation are discussed. It is suggested that the ultimate goal should be the process-outcome type of evaluation. Thirty-eight references are given.

HOME CARE, AFTER-CARE

See Abstract Nos. 1663, 1675, 1678

SPECIAL DEPARTMENTS

WARDS

See Abstract Nos. 1543, 1567

OPERATING SUITES

See also Abstract No. 1554

1621. SMITH, P. **Updating O.R. plant systems.** *Dimensions in Health Service*, Toronto, 1975, Sept., vol. 52, no. 9, pp. 35-37.

This paper describes the upgrading of the eight operating theatres of Chedoke Hospitals, Hamilton, Ont., which was carried out while allowing surgery to continue unimpeded. Prior to finalizing the plan, one theatre was turned over to the contractor to strip it out and build it up to determine what sort of problems might be encountered in the other theatres. Work was staged so that six of the eight theatres were always in use. The programme included new ventilating system, replacement of the flooring and installation of new ceiling service units for the medical gases, the isolated power supply and the ground fault tripping.

ANAESTHESIA

See Abstract No. 1658

PHARMACY

See also Abstract Nos. 1565, 1608

1622. CURTIS, E. G. and PATEL, J. A. **Pharmacy-based analytical toxicology service.** *American Journal of Hospital Pharmacy*, Washington, 1975, July, vol. 32, no. 7, pp. 685-693.

The analytical toxicology service, University of Michigan Medical Center, is described. Its primary purpose is to test specimens for drugs of abuse but also determines blood levels of therapeutic drugs. In addition to discussing analytical methods, the paper outlines the history of the service, legal basis and quality control, the relationship of drug information to toxicology service, service guidelines and staff.

1623. FORBES, D. R. **The organisation and co-ordination of an in-patient/out-patient dispensary within an existing ward distribution scheme.** London, Journal of Hospital Pharmacy, 1975, 11pp.

This study, which is based on visits to 21 hospitals, aimed to provide a hybridization of opinion that reflected the most suitable arrangement for supplying medicines to the wards. In addition to examining the role of ward pharmacist, it considers the prescription sheet, ward stocks and repacking. The author is convinced that there is no perfect system, the detail of any system depending on the environment in which the pharmacy works. Some of the more salient features of a system he would adopt are outlined. It is important not to become too sophisticated before the initial stages have been perfected. It is also important not to practise 'isolationism'—in-patient and out-patient dispensing should be co-ordinated within existing ward distribution schemes and other functions of the modern pharmacy.

1624. SHAW, S. H. A., ELLIS, S. and MAIR, D. C. **Function of NHS pharmaceutical officers in relation to pharmacists in hospital and general practice.** *Pharmaceutical Journal*, London, 1975, Sept. 20, vol. 215, no. 5836, pp. 281-288; discussion pp. 288-289.

In these three papers given at the British Pharmaceutical Conference 1975: (i) an area administrator discusses the integration of health services, with particular reference to multidisciplinary management; (ii) an area pharmaceutical officer discusses her role, covering management problems, access to the area health authority, the area pharmaceutical committee, education, service problems, and communication; and (iii) the chairman of an area pharmaceutical committee presents his view of the role of pharmaceutical officers, dealing with administration, relations with the area pharmaceutical committee chairman, and the professional advisory structure.

1625. RUBIN, H. and HARRISON, W. L. **Implementation of the medication technician concept.** *American Journal of Hospital Pharmacy*, Washington, 1975, Aug., vol. 32, no. 8, pp. 809-814.

This paper traces the development of a pharmacy-controlled medication technician programme at the Medical College of Virginia Hospitals. Specially selected candidates are recruited and trained to perform tasks in the centralized unit dose drug distribution system and administer drugs to patients, under the supervision and control of pharmacists. The paper deals with legality, liability, recruitment and selection, technician

training course, career development and advantages to the hospital. The service is provided to three units with a total of 120 beds; a minimum of 17 certified medication technicians are required. They rotate on a three-week basis between various shifts and patient care areas, including the pharmacy. Pharmacists are present in the patient care areas 24 hours a day, seven days a week. The job description for pharmacy technicians and details of their training course are included as appendices.

1626. WUEST, J. R. and SCHAENGOLD, S. **Pharmacy use of the Shared Hospital Accounting System.** *American Journal of Hospital Pharmacy*, Washington, 1975, Aug., vol. 32, no. 8, pp. 846-849.

This paper is based on the computer systems developed for the Hospitals of the Sisters of St. Francis in co-operation with the Franciscan Data Center. Most of the programs mentioned are currently in use at both the Providence Hospital and the St. Francis Hospital, Cincinnati, Ohio. The centre uses IBM equipment and the Shared Hospital Accounting System (SHAS) package. Information is entered into the computer from the pharmacy data sheet (reproduced). Much of the information obtained for the reports mentioned in this paper is derived from SHAS drug billing functions. There are three types of input: patient medication and intravenous therapy records, emergency drugs and use of non-chargeable floor stock. Output includes drug use statistics, formulary drug lists and monthly inventory; examples of these are reproduced.

1627. IVEY, M., TSO, Y. and STAMM, K. **Communication techniques for patient instruction.** *American Journal of Hospital Pharmacy*, Washington, 1975, Aug., vol. 32, no. 8, pp. 828-831.

The techniques of pharmacist-patient communication are discussed, including ways in which the pharmacist can identify the patient's information needs, control communication timing, define communication objectives, develop methods of communication and evaluate the effectiveness of his instructions.

1628. CLASEN, T. E., GROGAN, J. E. and WALDER, D. J. **Pharmacy newsletter evaluation by nurses.** *American Journal of Hospital Pharmacy*, Washington, 1975, Aug., vol. 32, no. 8, pp. 832-835.

The pharmacy at the Veterans Administration Hospital, Minneapolis, has published a regular monthly newsletter for one year. Questionnaires were sent to a random sample of 50 staff nurses in a survey conducted to determine readership and evaluate the newsletter's usefulness. Of the respondents, 91 per cent claimed to read the letter at least occasionally. Formulary and pharmacy policy information was considered most important. Interest in drug quizzes and features concerning drug therapy appeared to be high enough to make the newsletter an aid to in-service education. Readership was felt to be at a sufficient level to justify publication of a regular monthly newsletter for staff nurses.

1629. GURWICH, E. L. and SWANSON, L. N. **Clinical pharmacy practice in an outpatient clinic.** *Journal of the American Pharmaceutical Association*, Washington, 1975, July, vol. NS 15, no. 7, pp. 392-399.

A special out-patient clinic for a 22-bed medical ward was set up at Detroit General

Hospital as part of a health care research project at Wayne State University. The clinic included the ward physicians, which increased patient return rate, and pharmacists, in an experimental role. The results of a study of 112 patients seen by pharmacists over one year are tabulated. They show that multiple patient interviews by pharmacists increased medication compliance by giving patients additional information about the drugs and identifying and reducing hindering factors. In addition, drug related problems were identified more often than at physician consultations. Recommendations made to the physicians on drug therapy were accepted in 60 per cent of cases.

1630. STIMMEL, G. L. **Clinical pharmacy practice in a community mental health center.** *Journal of the American Pharmaceutical Association*, Washington, 1975, July, vol. NS 15, no. 7, pp. 400-401, 418.

The District V Mental Health Center in San Francisco has developed the position of clinical pharmacist within its multidisciplinary team. His role is that of drug consultant throughout the Center and of drug therapist in some clinics with his own caseload. He has a role in staff education concerning drug therapy both in the Center and throughout the district and is responsible for the drug distribution system in the district.

1631. WHITE, S. J., MILLER, P. O. and GODWIN, H. N. **Unit dose innovations.** *American Journal of Hospital Pharmacy*, Washington, 1975, Aug., vol. 32, no. 8, pp. 814-817.

In an attempt to refine its unit dose system, make it more efficient for pharmacy and nursing, and reduce the possibility of errors, the University of Kansas Medical Center has implemented several innovations. This paper describes four: (i) a system for filling oral syringes; (ii) a procedure for distributing refrigerated doses; (iii) verification of the nurse's interpretation of drug orders; and (iv) preparation of dose administration schedules in the pharmacy.

1632. SHEPPARD, P. T., PRIEST, S. L. and MEMOS, J. J. **Gummed labels solved sticky problem.** *Hospitals*, Chicago, 1975, Aug. 1, vol. 49, no. 15, pp. 77-78.

Brockton (Mass) Hospital has implemented a computerized intravenous (IV) solution billing system that has reduced pharmacy, data processing and nursing administrative time and will reduce lost revenue from IV solutions by an estimated $15,000 a year. The computer aspects are taken directly from the hospital's normal billing information and the system requires no special data input procedure. The computer generates a daily patient printout for each nurses' station. When a nurse requires an IV solution, a preprinted, gummed identification label on the solution is removed and attached to the printout, against the relevant patient's name. The label contains coded information on the type, amount and cost of the solution. After the daily exchange of printouts a pharmacy aide tallies the number of IV solutions used and restocks the supply. A billing secretary in the pharmacy uses the sheets to determine the total IV solution costs for each patient.

LABORATORIES

See also Abstract Nos. 1552, 1641

1633. TAYLOR, R. J. and others. **Use of bacteriological investigations by general practitioners.** *British Medical Journal*, London, 1975, Sept. 13, vol. iii, pp. 635-636.

The numbers of vaginal swabs, faecal specimens, throat swabs, and urine specimens submitted by 104 general practitioners to the bacteriology laboratory, City Hospital, Aberdeen, differed widely. The doctors who made most use of the laboratory service rarely did so equally for all four investigations but usually for only one or two. Similarly, those who used the service least often made frequent use of one particular investigation. Further studies are needed to identify and evaluate the reasons for the apparently substantial disagreement among general practitioners concerning the value of these different bacteriological investigations in general practice.

BLOOD TRANSFUSION DEPARTMENT

1634. KAROW, A. M. and GLASSMAN, A. B. **Should blood banks become organ banks?** *Transfusion*, Philadelphia, 1975, May/June, vol. 15, no. 3, pp. 285-286.

With the advent of cryogenic preservation blood banks could also serve as depositories for other organs and be responsible for their acquisition, preservation and immunology. The biological principles of tissue preservation are the same for blood, cornea or kidney and the preservation of sperm, cornea and skin is usually an activity of the sustaining service of blood banks. The preservation of all transplantable tissues in one administrative unit would provide technical proficiency because it would employ full-time specialists. It would also prevent duplication of equipment. Demands for preserved tissue are likely to increase as artificial insemination becomes more frequent and improved procedures make more organ transplants possible. Organs from dead bodies are normally preferable to those from living persons and large numbers of Americans are willing for their bodies to be used after death. The development of organ banks could benefit from the administrative organization of blood banks built up over 50 years.

1635. MOLE, R. H. **Inventory control in hospital blood banks.** *Omega*, Oxford, 1975, Aug., vol. 3, no. 4, pp. 461-473.

The need for the maximum use of the limited blood supplies in the National Blood Transfusion Service leads to stocking policies in hospital blood banks dependent upon the age, use and replenishment of blood supplies; these are difficult to establish in the case of rare bloods. A statistical model is presented which considers all the variables and indicates the relationship between wastage and shortage.

1636. ROBERTS, S. C., RUESS, D. T. and CAMP, F. R. **A computer-based frozen blood inventory and information system.** *Transfusion*, Philadelphia, 1975, May/June, vol. 15, no. 3, pp. 278-284.

An operational automated information system was established at Fort Knox, Kentucky, to facilitate the management of records relating to frozen red blood cells. The system uses a General Electric model 415 computer on a time-sharing basis.

It is programmed to compile and retrieve data concerning stored units, prepare shipping documents as required and maintain transfusion records in a retrievable manner for thawed or shipped units. Request for frozen red blood cells are entered into the computer on a remote keyboard terminal by typing in appropriate information regarding requirements. This includes method of cryopreservation, specific antigenic characteristics required and the amount needed. The computer prints out on the terminal keyboard the units meeting requirements and the keyboard operator indicates to the computer where they are needed if they are to be shipped. This input then generates a shipping invoice and a new file for the units in a permanent transfusion record which can be accessed either by the donor number or the frozen blood cell code.

DIAGNOSTIC X-RAY DEPARTMENT

See also Abstract Nos. 1540, 1566

1637. POYNTER, R. **In the wake of silver recovery.** *Hospital Development*, London, 1975, May/June, vol. 3, no. 3, pp. 46, 49; July/Aug., vol. 3, no. 4, p. 23.

This paper describes the development of silver recovery from X-ray processing and the drainage problems arising from it. Some possible solutions are suggested.

OCCUPATIONAL THERAPY DEPARTMENT

1638. BROWN, E. A. **Girls for training.** *British Journal of Occupational Therapy*, London, 1975, Sept., vol. 38, no. 9, pp. 198-201.

A personality profile for a successful occupational therapist was derived from the results of a questionnaire completed by 32 head occupational therapists. When applied in a new selection procedure at the Glasgow School of Occupational Therapy, it was found that many applicants fell short of the standard profile. The analysis reported here was made to see exactly what kind of people were applying for training. It involved a random sample of 50 from each of the years 1968 and 1970 to 1973. The analysis covered marital status, starting age, location of home, socio-economic status, educational background, educational attainments, and other applications. The results are presented in seven tables and discussed. Among the conclusions are: (i) there is no apparent developing trait over the five years; (ii) the major untapped sources of potentially suitable candidates are men and married women; (iii) the age of candidates was very young; and (iv) nearly half of the 250 candidates had also applied for other remedial professions or teaching. The implications of these findings are discussed.

DEPARTMENTS FOR SPECIAL THERAPY

1639. ROYAL COLLEGE OF PHYSICIANS OF LONDON. STANDING COMMITTEE ON GASTROENTEROLOGY. **The organisation of a gastrointestinal service.** Reprinted to include amendments. London, Royal College of Physicians of London, 1975, [ii], 8pp. £0.10.

Hospitals throughout the country should be provided with adequate gastrointestinal services. This requires the provision of suitable facilities and of adequate training for

staff. This report makes recommendations on the organization, accommodation, equipment, staffing and functioning of gastrointestinal services.

1640. SKOUTAKIS, V. A. and others. **Team approach to total parenteral nutrition.** *American Journal of Hospital Pharmacy*, Washington, 1975, July, vol. 32, no. 7, pp. 693-697.

The organization, functions and results of a total parenteral nutrition (TPN) team consisting of a surgical staff physician, a senior surgical resident, a nurse and a pharmacist are described. In the 160 patients treated, the incidence of septicaemia as a complication of TPN has been less than one per cent and the rate of serious metabolic derangements of TPN has been 2.7 per cent for electrolyte aberrations and five per cent for significant glycosuria in this series. It is recommended that hospitals which cannot provide such a team should refer patients requiring TPN to a hospital with a TPN team.

1641. JONES, B. M. **A hospital dialysis unit: its effect on staff and laboratories with particular reference to serum hepatitis.** *Gazette of the Institute of Medical Laboratory Technology*, London, 1975, Sept., vol. 19, no. 9, pp. 369-370.

A haemodialysis unit was opened in April 168; by September 1972 there were 14 patients attending the unit with a further 36 on home dialysis who attended for regular medical checks. During this period there was a serious outbreak of hepatitis B antigen (HB Ag) positive infection which affected 28 patients, seven relatives and 10 staff members. An additional unit was opened in 1973 for use with HB Ag negative patients only. Two members of the medical staff have had serum hepatitis and have been HB Ag positive. Four members of the nursing staff have been found to be HB Ag positive and a further two were HB antibody positive. It is difficult to recruit nurses, but not medical staff. The first medical laboratory scientist to become HB Ag positive was in the chemical pathology laboratory in 1971. A second case occurred in the same laboratory and another in the haematology department, both in July 1972; there was a third case in the chemical pathology laboratory in August 1973. There is a need for recognition of serum hepatitis as an industrial disease, continued monitoring of laboratory techniques and safety precautions and consideration of the possibility of purchasing any laboratory equipment which would reduce the risk of infection further.

INTENSIVE CARE UNITS

1642. GLAESER, D. H. and others. **A hierarchial minicomputer system for continuous post-surgical monitoring.** *Computers and Biomedical Research*, New York & London, 1975, Aug., vol. 8, no. 4 pp. 336-361.

A patient monitoring system is described which has been implemented with interconnected minicomputers organized in a functional two-level hierarchy. Data acquisition, preliminary analysis using algorithmic signal processing techniques, output displays, and user interaction are functions of the minicomputer at the first level of the hierarchy, the patient preprocessor (PP). The encoded compressed data output from each PP is transmitted to the inquiry station (IS), the minicomputer at the

next higher level of the hierarchy. It serves as an extension of preprocessorlike functions which can be more efficiently time-shared within one computer. The IS provides secondary mass storage for data in all eight trend displays, additional algorithmic processing for ECG arrhythmias, and the generation and transmission of appropriate physiological and data quality alarm messages to staff at the bedside. Medications, nurses' notes, fluid, input-output, and similar data for the patient's chart are entered into the charting system. Display summaries of this data are available for correlation with data collected and stored in the monitoring system.

1643. DOWNES, J. J. and RAPHAELY, R. C. **Pediatric intensive care.** *Anesthesiology*, Philadelphia, 1975, Aug., vol. 43, no. 2, pp. 238-249.

The elements of intensive care are listed with special reference to the needs of children; the most common paediatric disorders resulting in acute major system failure are set out in a table and discussed. Most disorders requiring intensive care in infants and children are associated with impaired ventilation and when this is sufficient to threaten life acute respiratory failure exists. The causes of acute respiratory failure are set out and its diagnosis, treatment and possible complications are described. A survey of eight major paediatric intensive care units admitting all types of critically ill infants and children indicated an average survival rate of 88 per cent. In the paediatric intensive care unit at the Children's Hospital of Philadelphia acute respiratory failure treated with mechanical ventilation was associated with a 64 per cent survival rate. Intensive care services are extremely expensive and to avoid duplication of facilities there is a pressing need for regional distribution of such services. Regional centres need an effective and safe transport network to facilitate transfer of patients.

1644. ABILD, K. and ANDERSEN, J. D. Computeren i den kardiologiske sygepleje: datasystemer kan give en mere rationel sygepleje. **[Computers in cardiological nursing: data systems can provide more rational nursing.]** *Sygeplejersken*, København, 1975, Aug. 6, no. 31, pp. 12-14.

A computer has been used in the intensive observation of coronary patients at the Righospital, Copenhagen, since 1971. It makes routine records of the patient's blood pressure, temperature, pulse, fluid balance and response to therapy, making written records unnecessary. The system is also used for rapid review of electrocardiograph tapes from cardiac out-patients' portable tape recorders, as well as in clinical research. The coronary ward comprises six intensive care beds, an observation room, and a nurse's office. Every room contains a terminal displaying text or graphs, a set of input buttons, a light-pen for indicating points on the screen, and electrocardiograph and blood pressure equipment sockets. The computer's administrative functions comprise recording of patient's name and identity number on admission, transfer or discharge. Clinical computations such as body area calculations or amount of medicine required are rapidly effected. The system supervises in-coming electrocardiograms, and gives an alarm on recognizing arrhythmia patterns. Staff intended to use the system must be trained and motivated to exploit its possibilities to the full, whilst not trying to ask the machine to store unnecessary data currently recorded on paper. The paper is illustrated with a block diagram of the system, two photographs of a terminal, and a reprint of a fluid balance display.

SPECIAL HOSPITALS AND UNITS

OUT-PATIENT

See also Abstract Nos. 1629, 1654, 1656-1658

1645. SIMPSON, J. N. **The Ashland plan: an ambulatory care outreach alternative for a community hospital.** *Hospital Administration*, Chicago, 1975, vol. 20, no. 3, pp. 33-53.

The Ashland Plan is an innovative ambulatory care outreach programme sponsored by Richmond (Va.) Memorial Hospital to minimize existing deficiencies in continuity of medical care within its primary service area. This paper discusses the conceptual criteria formulated for the programme, the feasibility studies which preceded it and the development or its organization. Community involvement has been achieved through the establishment of a Community Advisory Board; its functions are outlined. Also discussed are operational considerations, professional recruitment and staffing, the centre itself, use and financial implications, and the medical audit programme.

1646. OLOWOKURE, T. O. **Hospital out-patient clinic costs: an analysis.** *Public Finance and Accountancy*, London, 1975, Sept., vol. 2, no. 9, pp. 292-296.

Researchers into hospital cost behaviour have always ignored the out-patient department's costs. This study analyses the costs of a sample consisting of 189 large acute, non-teaching hospitals in England and Wales during the financial year 1967-68. It shows that out-patient clinic costs vary substantially between hospitals. Differences in types of equipment, patient-mix, rates of use of departmental facilities and location are factors which cause costs to vary. For cost control purposes, the influence of the factors must be taken into account when costs care being compared between hospitals. Another factor, which cannot be ignored, is the method of apportioning costs between in- and out-patient departments which may differ between hospitals. For planning purposes, the analysis indicates that if out-patient clinics are well-equipped, substantial savings in cost will accrue. Since the rate of out-patient attendance per in-patient week has negative influence on mean stay and lowers overall costs, it is important to make maximum use of the out-patient clinic's facilities in order to obtain maximum benefits for the hospital and the patient.

1647. KNOX, J. H. **Relocating an outpatient service.** *Hospitals*, Chicago, 1975, Aug. 1, vol. 49, no. 15, pp. 61-64.

The move of the out-patient department, Naval Regional Medical Center, Newport, R.I., was planned by a committee of three permanent members, together with representatives of each of the facility's service areas. Each of the permanent members was assigned certain areas of responsibility. Initially the committee met weekly, but meetings were less frequent as plans progressed. Programme evaluation and review technique (PERT) was adopted in the early stages and a complete PERT network was designed to include all events that could be anticipated in the initial planning stages. Details are given of steps taken to relocate equipment and supplies and medical

records, staff orientation and public relations. Although the move was organized with minimal disruption of patient care (only a three-hour suspension of services), there were some shortcomings and these are analysed.

1648. STRATMANN, W. C. **A study of consumer attitudes about health care: the delivery of ambulatory services.** *Medical Care*, Philadelphia, 1975, July, vol. 13, no. 7, pp. 537-548.

This paper examines the patient's decision to select a source of care, offers a theoretical construction of this choice process, and reports on the results of a survey that tested the model among the population of Rochester, N.Y. Reasons for selecting a source of ambulatory care are placed in categories that relate to individual perceptions of the utility of cost, time, convenience, psychosociological factors, and the technical quality of care. The relative importance of these criteria and other findings relating to sociodemographic characteristics and individual patterns of use are reported.

1649. RUSSO, R. M. and others. **A chart audit peer review system in an ambulatory service.** *Pediatrics*, Evanston, Ill., 1975, Aug., vol. 56, no. 2, pp. 246-254.

A system of providing rapid review of ambulatory patient records using a set of criteria was developed and tested at Kings County Hospital, Brooklyn, N.Y. Of 337 records selected for review, 25 per cent were not reviewable. Of the remaining 75 per cent, virtually one half proved to be lacking in one or more of the established criteria. Deficiencies tended to occur most often in criteria related to the physical examination of the child. Physician compliance with the criteria could not be conclusively shown to improve during the five-month study period, though physician acceptability was judged as good. A large percentage (47.3 per cent) of deficient records could be corrected by the responsible health professional. The chief advantages of the system are that it is rapid and easy to perform. It focuses on the major service provided by the facility, i.e. acute medical care, and on the individual providing that service.

CASUALTY AND ACCIDENT

1650. GIBSON, G. **Emergency medical services research: integration or isolation?** *Health Services Research*, Chicago, 1974, vol. 9, no. 4, pp. 255-269.

The Emergency Medical Services Systems Act of 1973 was passed by the United States Congress against considerable opposition, including that of the Department of Health, Education and Welfare, to provide Emergency Medical Service (EMS) programme funding and to establish a research programme. The background to the present ideal of isolating EMS research rather than integrating it with research into general health services is discussed and considered unsatisfactory. Evidence to back this is presented; an analysis of the papers on EMS research presented to the American Public Health Association 1974 showed that they were of a lower standard than others in health service research.

INFECTIOUS DISEASES AND ISOLATION

See Abstract No. 1602

CHILDREN

See also Abstract Nos. 1587, 1643, 1649, 1677

1651. ASSOCIATION FOR THE WELFARE OF CHILDREN IN HOSPITAL. **A recommended 'Health care policy relating to children and their families'.** *Medical Journal of Australia*, Melbourne, 1975, Aug. 9, vol. 2, special supplement, no. 2, pp. 1-16.

This paper presents eight policies that should be adopted in connection with the care of children in hospital and makes recommendations on the implementation of each. The policies cover: (i) admission only if unavoidable; (ii) minimization of length of stay; (iii) fostering of a close and continuous relationship between child and family; (iv) minimization of physical and emotional stress to children and their families; (v) special selection of staff; (vi) training of staff; (vii) opportunity for health education; and (viii) on-going evaluation of policies and programmes of care.

1652. ROSKIES, E. and others. **Emergency hospitalization of young children: some neglected psychological considerations.** *Medical Care*, Philadelphia, 1975, July, vol. 13, no. 7, pp. 570-581.

In spite of the fact that emergency admission is the most common form of admission for young children, as well as containing the greatest potential for trauma, almost no reference has been made to it in the psychological literature on children in hospital. To explore the theoretical and practical feasibility of research in this area a pilot study was designed to investigate the reactions of a sample of children, parents and staff to the first six hours of emergency care, compared with those of a similar sample to elective admission. Sixteen children (eight in each group) aged 11 to 48 months were selected on a time-sample basis from the patients of a large paediatric hospital and were followed by trained observers using a specially designed observation schedule. The results indicated that, as expected, emergency does constitute an even greater stress for children, parents and staff than the already stressful elective admission. In both conditions, however, the results were more complex and more disturbing than anticipated. The implications of these findings, as well as suggestions for further research, are discussed.

1653. CAMERON, A. **Some useful information for hospital play staff.** Bristol, The Author, 1974, 29pp. £0.50.

The information included in this compilation for hospital play staff covers books, films, national organizations, international organizations, medical centres, medical terms, equipment and addresses.

1654. LESLIE, H. J. and others. **Pediatric clinical faculty structure and teaching hospital function.** *Pediatrics*, Evanston, Ill., 1975, Aug., vol. 56, no. 2, pp. 230-233.

An organization of clinical faculty has been formed at Rainbow Babies and Children's Hospital, Cleveland, Ohio, to help co-ordinate the mutual goals but sometimes conflicting needs of practising paediatricians and a teaching hospital. The organization has been active in developing and conducting educational experiences for students, house officers and practitioners. It has contributed to efforts to improve ambulatory and in-patient care. Collaborative clinical research projects involving

practitioners and academicians are planned. The authors know of no other existing similar organizations, but propose that hospitals with similar problems should consider this mechanism to help improve their academic and patient care programmes.

1655. BRESLAU, N. and others. **Comprehensive pediatric care: the patient viewpoint.** *Medical Care*, Philadelphia, 1975, July, vol. 13, no. 7, pp. 562-569.

Two meanings of the term comprehensive are delineated. The first refers to a wide scope of services, the second to a humanistic approach to the patient. Findings from one paediatric practice suggest that the two meanings constitute two independent variables with respect to patient expectations. Patient responses to questions regarding their expectations of the paediatrician revealed a tendency to hold a traditional disease orientation. Comprehensive care as a broad scope of health services that included mother guidance in child rearing is not a common goal for the mothers. On the other hand, a comprehensive approach by the paediatrician is a standard shared by most respondents in the sample: high priority is accorded the pattern of the personal physician with whom a patient forms a continuous doctor-patient relationship which instils in the patient trust that the physician's recommendations are based on thorough knowledge of the patient as an individual.

1656. MARCOVITCH, H. and others. **District paediatric day care.** *Archives of Diseases in Childhood*, London, 1975, Aug., vol. 50, no. 8, pp. 648-651.

This paper describes attempts to organize medical day cases on a general paediatric ward, and analyses some of the problems encountered. Northwick Park Hospital has a 29-bed children's ward which admits both surgical and medical patients. Following a feasibility study, a further 190 day patients were studied during a six-month period. A four-bed self-contained room and adjacent play area within a general day care unit was then designated for children and superseded the ward facility. Staffing and procedures are outlined and day care in the spectrum of need is discussed.

1657. BERKELHAMER, J. E. **Group practice in a university-based general pediatric clinic: a preliminary report.** *Pediatrics*, Evanston, Ill., 1975, Aug., vol. 56, no. 2, pp. 234-238.

The general paediatric clinic at Wyler Children's Hospital, Chicago, is a primary care facility where patients are seen on a non-referral basis. On 1 July 1973 the format for health care delivery was changed from a solo practice model to a group practice model. The group concept was introduced by dividing all physicians who worked in the clinic area into three teams. Each team was named for one of three existing paediatric nurse associates. A social worker was assigned to each team. Evaluation and comparison of the two systems demonstrated a significant improvement in the attitudes of house staff toward their experience in primary care delivery.

1658. STEWARD, D. J. **Outpatient pediatric anesthesia.** *Anesthesiology*, Philadelphia, 1975, Aug., vol. 43, no. 2, pp. 268-276.

The three main reasons for preferring to operate on children without admission to hospital are: (i) emotional disturbance is minimized; (ii) there is less risk of hospital infection; and (iii) the cost of treatment is reduced. In selecting patients for out-patient surgery the anaesthetist and the surgeon must have mutually acceptable criteria.

Aspects of selection include age and physical status of the patient, type of procedure and likely duration of the operation, attitude of parents and their nearness to the hospital. Paediatric facilities should be separate from those for adults though some services may be shared. They should be in a medical centre with paediatric in-patient facilities in case a patient exceptionally might need to be admitted. Operating and recovery rooms should be equipped as for in-patients and staff should be of similar calibre. In this paper the preparation of the patient for surgery is discussed and suitable anaesthetic techniques are described. Post-anaesthetic management and assessment of recovery, complications and the medico-legal implications of out-patient surgery are also covered.

1659. KORSCH, B. M. **The child and the operating room.** *Anesthesiology*, Philadelphia, 1975, Aug., vol. 43, no. 2, pp. 251-257.

In determining the effect of surgery on a child his age must of course be taken into consideration—infancy, the toddler, pre-school and school ages and adolescence all present their special problems. The background of the child and his past history also affect his psychological needs. When a child is to be prepared for surgery and anaesthesia these factors must be taken into consideration. Meeting and talking to the anaesthetist on the evening before the operation may help to allay a child's fears. Re-assurance that there will be no pain and no fear of suffocation can be given in terms suitable to age and development. Verbal preparation is appropriate for older children but play techniques are needed for younger ones. Honesty is essential when dealing with all children. The proper timing of preparation may vary from a few hours before the operation for children up to three years to a few weeks for school age and older children. Parents are the most suitable people to prepare very young children though they will need professional advice on this. The older the child the more important it is that he meets the anaesthetist and the surgeon. The amount of information to be given will naturally depend on the child's age and personality, but in all cases the establishment of mutual trust and confidence is the most important issue.

1660. VISINTAINER, M. A. and WOLFER, J. A. **Psychological preparation for surgical pediatric patients: the effect on children's and parents' stress responses and adjustment.** *Pediatrics*, Evanston, Ill., 1975, Aug., vol. 56, no. 2, pp. 187-202.

Eighty-four children, aged three to 12, admitted for tonsillectomies, were randomly assigned to one of three treatment conditions or to a control group: (i) a combination of systematic preparation, rehearsal and supportive care conducted prior to each stressful procedure; (ii) a single-session preparation conducted after admission; and (iii) consistent supportive care given by one nurse at the same points as in (i) but including no systematic preparation or rehearsal. The children's hospital adjustment was measured by blind ratings of behavioural upset and co-operation and by recovery room medications and pulse rates and time to first voiding. Post-hospital adjustment was assessed by the Post-Hospital Behavior Inventory. Parent outcome measures included self-ratings for anxiety and satisfaction with information and care. As hypothetized, the results demonstrated that children who received condition one showed significantly less upset and more co-operation and their parents reported significantly greater satisfaction and less anxiety than did children or parents in other groups. Younger children were significantly more upset and less co-operative than older children.

GERIATRICS AND LONG-STAY

See also Abstract Nos. 1541, 1562, 1595, 1596

1661. GRUER, R. **Needs of the elderly in the Scottish Borders.** (Scottish Health Service Studies No. 33) Edinburgh, Scottish Home and Health Department, 1975, xiv, 188pp. £1.80.

This is the report of a survey of the needs of the elderly in the Borders Health Board Area, a semi-rural area in south-east Scotland. The purpose of the survey was to provide data for planning services for the elderly. A register of those over 65 years of age was compiled from the records of Executive Councils and long-stay hospitals. A sample of people on the register were interviewed. The social and medical condition of this elderly population is described and the effect of a number of factors is examined. Estimates have been made of unmet needs for medical and social services and of the scale of provision which would be required to meet them. Alternative methods of identifying those in need have been examined and the resources required for screening programmes have been estimated. The need for hospital beds, residential home places and sheltered accommodation within the area has been examined and an area geriatric policy for the future suggested.

1662. BREARLEY, P., editor. **Self-help, participation and the elderly: report of a conference on self-help and participation in continuing care of the elderly, held at Southampton University in September 1974.** Southampton, University of Southampton, 1974, iv, 62pp. £1.00.

Good medical and social services can do a great deal to promote good health and prevent disability in the elderly, but in the final analysis it would seem that the answer lies in the individual's own hands. This was the concept behind the conference reported here and the papers report self-help schemes in hospitals, residential homes and the community.

1663. AGE CONCERN LIVERPOOL. **Going home? The care of elderly patients after discharge from hospital: report on the Continuing Care Project.** Liverpool, Age Concern Liverpool, 1975, [ii], v, 74pp. £1.00.

The objective of this project was to recommend to the appropriate agencies, in respect of the full range of statutory and voluntary services, ways of improving the hospital after-care service for the elderly. The project team first investigated fully the reason for the problem and then devised and tested changes in procedures to improve the situation. They recommend the appointment of an after-care co-ordinator in each hospital where the elderly are patients. The responsibilities and qualifications of the after-care co-ordinator are outlined and the costs and benefits of such an appointment are assessed. A job description is given in an appendix.

1664. TESTER, J. L. **Dental care in 'long-stay' hospitals in Scotland.** *Health Bulletin*, Edinburgh, 1975, July, vol. 33, no. 4, pp. 138-142.

The results of a questionnaire sent by the Scottish Hospital Advisory Service to 39 dentists working in 76 long-stay hospitals are tabulated and discussed. They show that dental services are inadequate and provided under difficult conditions. An

exception was the mobile unit of one dental practitioner which is described. The dentists had had little training in work with psychiatric and geriatric patients and had a mixed response about trained assistance. The dentists who provided the services were an ageing group and would be difficult to replace.

CANCER

See also Abstract No. 1602

1665. YARBRO, J. W. **Preventive medicine, an integral component of cancer centers.** *Preventive Medicine*, New York, 1975, June, vol. 4, no. 2, pp. 91-94.

Preventive medicine is possibly the most neglected and certainly one of the most needed components of any effective cancer center. A programme of preventive medicine should include public education, attention to tobacco and other high risk factors, consideration of cost-benefit ratios, cancer detection and integration of prevention into the total cancer programme. Effective cancer prevention must include not only the prevention of occurrence, but also the prevention of cancer progressing from an early curable stage to an advanced incurable lesion.

CARDIOLOGY

See Abstract Nos. 1644, 1668

ORTHOPAEDICS

See Abstract No. 1607

UROLOGY

See also Abstract No. 1641

1666. WICKHAM, J. E. A. and others. **A computer-based record and organisation system for a department of urology.** *British Journal of Urology*, London, 1975, Aug., vol. 47, no. 4, pp. 345-357.

The system described is at the 20-bed urology department at St. Bartholomew's Hospital, London. The department also has access to six day-ward beds on two days a week. The aims of the system were: (i) to provide an organization for the rapid and comfortable passage of the patient from the community to the department and back to the community with the necessary follow-up; and (ii) to provide a built-in mechanism for self-assessment of the medical and clinical efficiency of the unit. To fulfil these aims an efficient and practicable system of data handling was needed. The system resolved itself into three principal parts: (i) a master identification sheet for each new patient coming under the care of the unit; (ii) a series of detailed sub-cards for intensive study of specific disease entities; and (iii) related computer punch cards for the master card and each sub-card. After four years' application of the system two principal advantages

emerged: (i) the large number of patients who used to attend out-patient clinics was greatly reduced as vague follow-up appointments have been abolished; and (ii) it is possible to review performance rapidly. It is from the sub-cards that the most valuable information is obtained; a figure in the text illustrates this. Occasionally the treatment of a patient discharged to the care of his general practitioner is allowed to lapse and he is subsequently sent back to the casualty department. It is questionable whether the system is responsible for this or whether it reveals such deficiency more clearly.

SURGERY

See also Abstract Nos. 1659, 1660

1667. PERKOFF, G. T. and others. **Lack of effect of an experimental prepaid group practice on utilization of surgical care.** *Surgery*, St. Louis, 1975, May, vol. 77, no. 5, pp. 619-623.

A previous paper showed that patients of a prepaid group practice used fewer hospital days and received more ambulatory services than did a control group cared for in the traditional fee-for-service system. The reduction in hospital use was due almost entirely to reduced admission for non-surgical rather than surgical reasons. This paper examines in detail this surgical experience for a three-year period. It shows that the same proportion of emergency, urgent and non-urgent admissions occurred in both groups. There was also no difference in the proportion of various procedures often thought to be over-used in the traditional medical care system. High quality of surgical care in the study area was considered the most likely explanation for the failure to show differences in the prepaid group practice. Few, if any, unnecessary operations were performed in either group. In this study, there was no measurable effect on surgical use by a change in the method of medical care organization and payment.

1668. **Patient preparation for open heart surgery.** *Southern Hospitals*, Greenville, S.C., 1975, July, vol. 43, no. 7, p. 15.

At Texas Institute, Houston, cardiovascular nurse specialists follow the patient for open-heart surgery throughout his stay acting as confidant and friend. They do not help in the operating theatre or nurse in the intensive care unit. They also act as liaison between the patient, his family and the hospital. Brief details of the role of these nurses, including the special consideration shown to children, are outlined.

MATERNITY

See also Abstract Nos. 1604, 1605

1669. HACKEL, A. **A medical transport system for the neonate.** *Anesthesiology*, Philadelphia, 1975, Aug., vol. 43, no. 2, pp. 258-267.

This paper begins by reviewing experience with the regional care of critically ill newborn infants in several areas in the United States and 27 references are cited. Procedures at Stanford (Calif.) Medical Center are then described more fully. A diagram

in the text illustrates the transport procedure used there. The process is initiated by the primary (referring) doctor contacting a senior nursery physician (the transport co-ordinator) by telephone. The co-ordinator contacts the medical team and selects the method of transport. A communications system links the two hospital nurseries, their staff, the transport team and the ambulance group. Transport may be by surface ambulance, fixed-wing aircraft or helicopter and the merits of these are considered. Design criteria for a transport incubator are described and a photograph of one used at Stanford is given. The effects of a model transport system on neonatal mortality have been studied and a number of statistics relating to mortality costs, etc. are set out in tables. The Stanford Newborn Intensive Care Nurseries have served as a regional facility for 13 years. The area covered has a radius of 150 to 250 miles and 56 hospitals with about 45,000 deliveries a year are served.

GYNAECOLOGY

1670. STEELE, S. J. and GOODWIN, M. F. **A pamphlet to answer the patient's questions before hysterectomy.** *Lancet*, London, 1975, Sept. 13, vol. ii, pp. 492-493.

This paper describes the development and use of a pamphlet designed to give women most of the information they and their relatives would like to have and to reduce the failure of communication. The text of the pamphlet is reproduced.

OPHTHALMOLOGY

1671. LAW, F. W. **The history and traditions of the Moorfields Eye Hospital. Volume II: being a continuation of Treacher Collins' history of the first hundred years.** London, H. K. Lewis, 1975, xvi, 299pp. £6.00.

After summarizing the early history of Moorfields Eye Hospital, London, this volume gives an account of its development since the turn of the century. Many photographs are included.

DENTISTRY

See Abstract No. 1664

PSYCHIATRY

See also Abstract Nos. 1542, 1556, 1562, 1586, 1587, 1619, 1630

1672. HART, W. T. and BASSETT, L. **Measuring consumer satisfaction in a mental health center.** *Hospital & Community Psychiatry*, Washington, 1975, Aug., vol. 26, no. 8, pp. 512-515.

The degree of patient satisfaction should be considered when evaluating mental health services. An attempt was made to measure consumer satisfaction of patients at Rochester (N.Y.) Mental Health Center by correlating it with various demographic and therapeutic parameters such as length of treatment, age, socioeconomic status

and previous expectations. One surprising finding was that patients treated by the approach least popular with the therapists, extended intake, rated the services higher than those treated by approaches considered more acceptable by the staff.

1673. EVANS, N. **Growing success of 'One to one'.** *New Psychiatry*, London, 1975, Sept. 11, vol. 2, no. 19, pp. 12-15.

The 'One to one' project for involving volunteers in activities and games with the residents of hospitals for the mentally handicapped has been described previously [see *Hospital Abstracts*, Vol. 15, Abstract 458]. This paper outlines the further development of the scheme in 1975, when preliminary figures show that at the 10 hospitals 2,500 volunteers and 5,000 patients have participated. Of the 1,500 volunteers who had never been inside a hospital for the mentally handicapped before, 240 stated their intention to visit regularly.

1674. MCCORMICK, M., BALLA, D. and ZIGLER, E. **Resident-care practices in institutions for retarded persons: a cross-institutional, cross-cultural study.** *American Journal of Mental Deficiency*, Albany, N.Y., 1975, July, vol. 80, no. 1, pp. 1-17.

Care of mentally handicapped persons in 19 institutions in the United States and 11 in a Scandinavian country was compared. A 30-item 'child management inventory' set out in the text was used in both countries. This measures rigidity of routine, block treatment, depersonalization (absence of possessions, privacy, etc.) and interaction between staff and resident. Living units in the Scandinavian country were found to be more resident-oriented than those in the United States. The most institution-oriented care practices were found in large central institutions and in living units for the most severely handicapped residents. The most resident-oriented practices were in group homes. Large living unit size was predictive of institution-oriented practices, but cost per day and the number of aides and professional staff to residents did not predict care practices. One reason for the difference between the two countries may be the more thorough training given to child care workers in the Scandinavian country. Tables in the text illustrate some findings of the study and there is a list of 29 references.

1675. CUTHILL, J. M. **Trends in the care of psychiatric patients.** *British Journal of Psychiatry*, London, 1975, Sept., vol. 127, pp. 265-275.

A detailed analysis is made of the population of the 1,300 Parc Hospital, Bridgend, Glamorgan. Attempts are made to determine the incidence of chronicity, with its various underlying causes. This is followed by details of the current admissions to the hospital from a catchment area where general hospital and psycho-geriatric units have been established, and estimates of future bed requirements. Finally there is a description of the several facilities of the general hospital unit and of the problems of developing a fully comprehensive mental health service.

1676. PARKER, G. and BARR, R. **The exodus of long-stay psychiatric patients.** *Medical Journal of Australia*, Sydney, 1975, June 28, vol. i, no. 26, pp. 801-803.

Increasing criticism is being made of the policy of discharging long-stay psychiatric patients to the community. A study of such ex-patients who had left Callan Park

Hospital was undertaken to assess this policy in New South Wales. The majority were unemployed pensioners, living in convalescent homes and boarding houses, who stated that they were happier than when living in the hospital. It would appear that one type of institution has been substituted for another, and that greater responsibility for the care and rehabilitation of such ex-patients needs to be offered.

1677. CRAWFORD, N. B. **A social education centre and its functions.** *Apex*, Kidderminster, 1975, March, vol. 2, no. 4, pp. 23-24.

The Social Education Centre at Lea Castle Hospital represents an attempt to provide for the needs of adolescents within a mental handicap hospital during their transition from school to as high a level of community integration as possible. It is administered by the local education authority and can cater for about 14 adolescents at any one time. Work in the centre falls into the following categories: (i) development of 'tool' skills (language, numbers, self-help); (ii) training in social mobility (use of basic services such as shops, transport, telephone, cafés and launderette); (iii) training in social competence (meeting people, posture, appropriate behaviour and clothing, etc.); (iv) preparation for work; and (v) developing skills and interests for leisure activities.

1678. SHARP, D. **Role of the community psychiatric nurse.** *Nursing Mirror*, Sutton, Surrey, 1975, Oct. 16, vol. 141, no. 16, pp. 60-62.

Community psychiatric nursing began 22 years ago at Warlingham Park Hospital, Warlingham, Surrey. Various reasons are given for sending psychiatric nurses into the community: (i) the need to discharge patients more quickly to reduce overcrowding; (ii) the need to reduce the admission rate to hospitals; (iii) the shortage of psychiatric social workers to undertake after-care; (iv) the relief of medical staff time in out-patient clinics; (v) linking with newly opened day hospitals; (vi) greater interest for the psychiatric nurse who had become too institutionalized; and (vii) provision of preventive and follow-up care in line with government policy. Suggestions are given for establishing a hospital-based community psychiatric nursing service: (i) the staff structure; (ii) the need for team service; and (iii) the work. Consultation centres might also be established in the community. In conclusion it is suggested that the community psychiatric nursing service be regularly reviewed and up-dated from the point of view of service and staffing.

1679. WHITEHEAD, T. **Crisis priorities.** *New Psychiatry*, London, 1975, Oct. 9, vol. 2, no. 21, p. 11.

The Government White paper *Better services for the mentally ill*, expected to be published in October 1975, will appear during yet another economic crisis with its subsequent cutting back on public spending. In successive governments education, housing, health and welfare services have been considered low priority items with services for the mentally ill consistently at the bottom of the list. Several aspects for consideration by the White Paper are suggested: (i) the establishment of a community psychiatric service, for which adequate financial resources must be provided by the central government for local authorities to carry out community care programmes; (ii) the need for good conditions of service and remuneration to attract a sufficient number of applicants into community care to make selection meaningful; (iii) the

need for a 24 hours a day emergency service based on the casualty department of each district general hospital, together with a mobile emergency team in each district, to solve the problem of admission to hospital of patients under informal and compulsory orders, by offering immediate community help; (iv) the need to offer incentives to psychiatric hospitals that carry out, or have carried out, reorganization into semi-autonomous units serving a geographical area; (v) the need to deal with more facets of mental health provision, including education, housing and workshops, for a more successful assimilation into the community; and (vi) the need to consider voluntary organizations as non-official sources of help that may need help and support from official agencies, if they ask for it.

SOCIAL MEDICINE

See Abstract No. 1665

AUTHOR INDEX

Abild, K. 1644
Age Concern Liverpool 1663
Andersen, J. D. 1644
Arie, T. 1556
Association for Practitioners of Infection Control 1601
Association for the Welfare of Children in Hospital 1651
Ayliffe, C. A. J. 1603
Ball, M. J. 1579
Balla, D. 1674
Barkman, B. 1585
Barr, R. 1676
Beard, T. C. 1557
Berkelhamer, J. E. 1657
Bloch, D. 1620
Bodey, G. P. 1602
Brady, L. P. 1607
Bragg, E. B. 1589
Brearley, P. 1662
Breslau, N. 1655
Brigden, R. J. 1535
Brown, E A 1638
Buhaug, H. 1609
Burroughs, W. A. 1552
Caetano, E. 1547
Calderhead, J. 1536
Cameron, A. 1653
Camp, F. R. 1636
Canter, D. 1542
Carruthers, L. J. 1561
Cheshier, B. L. 1610
Chester, T. E. 1531
Clasen, T. E. 1628
Collen, M. F. 1580
Cook, A. M. 1564
Coppini, G. 1577
Craddock, J. G. 1546
Crawford, N. B. 1677
Crook, W. J. 1611
Curtis, E. G. 1622
Cuthill, J. M. 1675
Danielsen, E. 1573
Davis, P. W. 1606
Downes, J. J. 1643
Draper, W. 1587
Durkin, C. J. 1613
Edwards, A. 1613
Edwards, B. S. 1618
Ellis, S. 1624
Elnicki, R. A. 1571
Elsasser, V. 1527, 1548, 1616
Ericson, R. P. 1586
Evans, N. 1673
Fatula, B. 1562
Finn, A. 1559
Forbes, D. R. 1623
Fost, N. C 1612
Freeman, R 1597
Freitag, W. 1591
Furst, E. 1563
Gage, H. B. 1540
Gamberale, F. 1554
Gibson, G. 1650
Glaeser, D. H. 1642
Glassman, A. B. 1634
Glueck, B. C. 1586
Godwin, H. N. 1631
Goldfarb, M. 1549
Goodwin, J. O. 1618
Goodwin, M. F. 1670
Grant, A. P. 1578
Great Britain. Department of Health and Social Security. Architects Division 1536
Grogan, J. E. 1628
Gruer, R. 1661
Gurwich, E. L. 1629
Hackel, A. 1669
Haefliger, E. 1527, 1548, 1616
Hammon, G. L. 1579
Hargreaves, I. 1617
Harrison, W. L. 1625
Hart, W. T. 1672
Hickey, T. 1562
Hofgaard, K. C. 1615
Horwitz, R. M. 1589
Ivey, M. 1627
Jeffers, J. R. 1574
Jones, B. M. 1641
Joynson, D. H. M. 1599
Karow, A. M. 1634
Kauffman, S. H. 1567
Kaufman, R. L. 1565
King, C. H. 1546
King Edward's Hospital Fund for London 1536
Knox, J. H. 1647
Kocher, R. E. 1595
Korsch, B. M. 1659
Krizelman, S. L. 1575
Larivière, R. 1576
Law, F. W. 1671
Leslie, H. J. 1654
Leveson, I. 1572
Lindberg, G. 1539
Linkert, M. 1583
Linn, B. S. 1619
Linn, M. W. 1619
Linnemann, C. C. 1555
McCool, B. P. 1553
McCormick, M. 1674
Mair, D. C. 1624
Maloney, M. H. 1605
Marcovitch, H. 1656
Marshall, K. 1560
Mélinand, G. 1530
Memos, J. J. 1632
Miller, J. C. 1566
Miller, P. O. 1631
Mitchell, R. G. 1600
Mole, R. H. 1635
Montag, G. M. 1594
Moore, R. V. 1593
Morgan, D. 1541
Morrison, M. 1593
Nationaal Ziekenhuisinstituut 1534
Olowokure, T. O. 1646
Olsen, M. D. 1594
O'Sullivan, D. D. 1584
Oxer, H. F. 1614
Parker, G. 1676
Patel, J. A. 1622
Penney, M. J. 1559
Perkoff, G. T. 1667
Pertl, D. 1598
Poleman, C. M. 1596
Poynter, R. 1637
Priest, S. L 1632
Rab, K S. 1543
Rains, A. J. H. 1528
Raphaely, R. C. 1643
Richardson, P. 1552
Roberts, S. C. 1636
Roskies, E. 1652
Royal College of Physicians of London. Standing Committee on Gastroenterology 1639
Rubin, H. 1625
Ruchlin, H. S. 1572
Ruess, D. T. 1636
Russo, R. M. 1649
Sanchez Paga, S. 1545
Schaengold, S. 1626
Schmitz, H. H. 1581
Schoenhard, W. C. 1569
Sellors, Sir T. H. 1528
Sharpe, D. 1678
Shaw, S. H. A. 1624
Sheppard, P. T. 1632
Shoos, K. J. 1575
Siebert, C. D. 1574
Simpson, J. N. 1645
Sjukvårdens och Socialvårdens Planerings- och Rationaliseringsinstitut 1529, 1550, 1582, 1592
Skoutakis, V. A. 1640
Smith, P. 1621
Sonrier, A. 1570
Spink, J. 1608
Stamm, K. 1627
Steele, S. J. 1670
Steward, D. J. 1658
Stimmel, G. L. 1630
Stratmann, W. C. 1648
Stroebel, C. F. 1586
Studnicki, J. 1533

Svensson, G. 1554
Swanson, L. N. 1629
Syrett, D. 1611
Taylor, R. J. 1633
Tester, J. L. 1664
Thompson, J. 1544
Trout, F. 1551
Tso, Y. 1627
Tuke, W. 1604
Turner, A. G. 1546
Vanhegan, R. I. 1600
Visintainer, M. A. 1660
Walder, D. J. 1628
Webster, D. J. T. 1606
White, S. J. 1631
White, W. C. 1585
Whitehead, T. 1679
Wickham, J. E. A. 1666
Wijmen, F. C. B. van 1568
Wolfer, J. A. 1660
Wuest, J. R. 1626
Yarbro, J. W. 1665
Yett, D. E. 1558
Zigler, E. 1674

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